Meridian 1

Meridian Integrated Call Assistant (MICA)

Engineering, installation, administration, and maintenance

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About this document

This document is a global document. Contact your system supplier or your Nortel Networks representative to verify that the hardware and software described is supported in your area.

This document explains how to engineer, install, configure, administer and maintain the NT5G01 and NT5G03 Meridian Integrated Call Assistant (MICA). The MICA is an Intelligent Peripheral Equipment (IPE) card that provides automated call attendant functionality to Meridian 1 Options 11 through Option 81C.

Description

The Meridian Integrated Call Assistant (MICA) is an Intelligent Peripheral Equipment (IPE) card that automatically answers incoming calls. Based on caller input and other information, MICA routes callers to their desired destination. There are several ways to configure MICA, from basic, menu-driven call handling to complex Automatic Caller Distribution (ACD) applications. This section contains three MICA configuration examples.

MICA features allow customers to:

- specify which greetings and menus are presented to callers, based on time-of-day, day-of week, holidays, etc.
- designate which telephone keypad keys callers press to answer menu prompts
- transfer calls to a specific number
- auto-terminate calls to single or multiple DNs
- route calls to call center agents based on caller's language
- route calls to call center agents based on the number dialed by the caller
- receive FAXes
- record personalized greetings and menus
- make personal verification recordings for dial-by-name calling
- record override greetings for emergencies, etc.
- import a telephone data base for dial-by-name functionality

All MICA firmware and customer database information is stored on a Personal Computer Memory Card Interface Association (PCMCIA) device, which is installed in the MICA card.

Menu-driven ACD scenario

This example shows how MICA works in a menu-driven ACD application. In this scenario, City Power Inc. has one number that auto-terminates on a MICA DN (800-555-1000). MICA provides an initial greeting and offers menu choices. Because the trunk route that this customer called into has 32 trunks, a MICA 32-port configuration is set up so all ports can play the same menus. The assignment of MICA ports to trunks is optional, depending on your application.

City Power Inc. provides a single phone number for sales, service, incoming faxes and emergencies. A customer finds an AC power line that has fallen off a pole during a storm and is live and sparking in her back yard. She calls the company at 800-555-1000 and is greeted by an announcement from MICA:

> "Welcome to City Power.
>
> For Sales press 1
>
> For a Service Emergency press 2
>
> For normal Service press 3
>
> For name dialing by spelling press 4
>
> If you know the extension number press 5

The customer presses 2 and MICA routes the call to an emergency service technician. If the customer selects "1" for Sales, they are then instructed to press 1 for commercial sales and 2 for residential sales. MICA transfers the call to an ACD queue.

CLID and DNIS ACD scenarios

In these ACD call center scenarios, all incoming call center trunks are auto-terminated to one or more MICAs, depending on the number of incoming trunks. MICA plays specific greetings and menus and routes calls based on information provided by the Dialed Number Identification Service (DNIS) and Caller Line Identification (CLID).

Note: CLID can include the ISDN protocol CLID and any caller identification on the set display.

MICA ACD call routing using DNIS

Customer A calls 1-800-555-2000 to buy a Moore Super Vacuum Cleaner as advertised on television. The trunk they are terminated on (route 1 unit 3) is auto-terminated to a MICA port. MICA sees the incoming DNIS 1-(800)-555-2000 and plays a special message:

"Thank you for calling the Moore Super Vacuum Cleaner order desk. Please hold for the next available operator"

The call is then placed into an ACD queue.

Customer B calls 1-800-222-3000 to buy a pair of Moore Super Boots as advertised on television. The trunk they are terminated on (route 1 unit 3) is auto-terminated to a MICA port. MICA sees the incoming DNIS (800) 222-3000 and plays a special message:

"Thank you for calling the Moore Super Boots order desk. Please hold on to order your new boots."

The call is then placed into an ACD queue.

MICA ACD call routing using CLID and DNIS

Customer A in Quebec, Canada wants to buy a Moore Super Vacuum Cleaner as advertised on television. She calls 1-800-555-2000 from her home phone (514) 321-1234. The trunk she is terminated on (route 1 unit 3) is auto-terminated to a MICA port. MICA sees the incoming CLID of (514) 555-1234 and the DNIS 1-(800)-555-2000 and plays a special French message:

"Thank you for calling the Moore Super Vacuum Cleaner order desk. Please hold for the next available operator"

The call is then placed into an ACD queue. MICA transmits CLID information so the ACD agent knows to answer the call in French.

Customer B in Toronto, Canada wants to buy a Moore Super Vacuum Cleaner as advertised on television. He calls 1-800-555-2000 from his home phone (416) 321-1234. The trunk they are terminated on (route 1 unit 3) is auto-terminated to a MICA port. MICA sees the incoming CLID of (416) 321-1234 and the DNIS 1-(800)-555-2000 and plays an English message:

> "Thank you for calling the Moore Super Vacuum Cleaner order desk. Please hold for the next available operator"

The call is then placed into an ACD queue. MICA transmits CLID information so the ACD operator knows to answer the call in English.

Engineering

This section provides engineering and technical information to help configure and provision the Meridian Integrated Call Assistant (MICA).

Equipment compatibility

The MICA can be installed in:

- Meridian 1 Options 21E, 51, 51C, 61, 61C, 71, 81, and 81C
- SL-1 systems NT and XT upgraded to support IPE cards
- Option 11E, 11C

Table 1 lists the Meridian 1 modules and card slots suitable for MICA. MICA cards are installed in the IPE shelf and defined in software as a digital line card.

Table 1
MICA-compatible card slots

Meridian 1 modules	MICA card slots
NT8D37BA/EC IPE modules, NT8D11BC/ED CE/PE modules	All available IPE card slots.
NT8D37AA/DC IPE modules	0, 4, 8, and 12
NT8D11AC/DC CE/PE modules	0

Power Requirements

The maximum number of MICA cards per IPE module is affected by all other cards located on the IPE shelf and their usage of the IPE 5V power supply. The MICA uses a 3 Amp current from the 5V supply. The IPE power supply provides 28 Amp current. The IPE power supply provides 22 Amp current for the Option 11.

The maximum IPE module per slot power budget is 30 Watts, with an effective limitation of 20 Watts for thermal compensation. The MICA card does not exceed the power allocated for each card slot in the IPE module. This means there is no power limitation for the number of MICA cards you can place in an IPE shelf.

> ***Note:*** Power requirements limit the number of MICA cards in an Option 11 cabinet to six.

Card and adapter specifications

MICA electrical and environmental specifications are the identical to other single-slot IPE cards. The MICA faceplate provides two slots (A and B) to hold the PCMCIA devices. Slot A must contain a PCMCIA device for MICA to function. Slot B is reserved for another PCMCIA device, used during database backup and upgrades. MICA has one red card status LED and two amber PCMCIA LEDs. The card status LED is ON when the card is disabled, OFF when card is enabled and blinks when MICA performs a self-test. The PCMCIA LEDs blink when the PCMCIA device is in use.

The MICA adapters provide serial and Ethernet communications. You install the NT5D52AB adapter in IPE modules. You install the NT5D52BB in Option 11C and 11E cabinets. Table 2 provides the adapter TTY and Ethernet pin description. Serial and Ethernet cables are customer-provided.

Table 2
NT5D52 connector pin description

	Pin Number	Signal Description
9-pin serial connector	2	RS232 TX (transmit)
	3	RS232 RX (receive)
	5	GND (ground)
RJ45 Ethernet connector	1	LAN_TX +
	2	LAN_TX -
	3	LAN_RX +
	6	LAN_RX -

MICA PCMCIA description

MICA uses a PCMCIA device to store all application-related functions in firmware. MICA requires a PCMCIA device to operate. The PCMCIA device can be a Flash card or a hard disk. Table 3 outlines the specifications and characteristics of the Flash and hard disk PCMCIA configuration.

Table 3
PCMCIA characteristics and specifications

Characteristic	Specification	
	PCMCIA Flash card	**PCMCIA disk**
Voice menus	16	32
Maximum number of services	eight	32
Maximum number of call screening tables	eight	32
Language capacity	one	eight
Incoming FAX auto detection	Yes	Yes
Name dialing	Yes	Yes
Name dialing database upgradeable via FTP	Yes	Yes
Database name capacity	1000	10,000
Predefined voice menus	14	22
Personal verification recordings	not available	3000 subscribers (up to three seconds in length)
Number of predefined services	four	five

Network engineering recommendations

This section describes the network components, cables, terminals and other information recommended to configure, administer and maintain MICA. Site-specific requirements may be different.

Serial network recommendations

You enter MICA keycode and set IP address through a serial connection. You can also use a serial connection for routine maintenance and system troubleshooting. The following items are required for MICA serial communications:

- 9-pin female serial cable. If you use a modem to communicate with MICA, you need a straight 9-pin to 25-pin cable, or a 9-pin cable with a null modem.
- A TTY or computer with terminal emulation software. Use the following RS232 interface parameters:
- Transmission speed: 9600 bps; Data bits: 8; Stop bit: 1 Parity: No; Flow control: none. Do not use XON/XOFF flow control.

Ethernet (TCP/IP) network recommendations

Nortel Networks recommends that you configure the MICA card as a subnet of the LAN and connect the MICA to the corporate network through a router. Tasks performed through the Ethernet TCP/IP connection include MICA Organization, Administration and Maintenance (OA&M), routine card administration (firmware upgrade, and refreshing or replacing database files) and maintenance and troubleshooting procedures. The items in the following list are required for a MICA Ethernet connection:

- One RJ45 cable required per card for permanent connection
- One IP address for each MICA. Subnet mask and gateway address information can be identical for all MICAs on one subnet.
- Hub or router if required for connection to customer LAN

Application engineering

MICA supports two Auto Attendant application options. Auto-attendant means that MICA answers the incoming call and presents the customer with the option to dial-by-name, or dial by number to set up a call transfer. The two options are:

- Auto-attendant using circular hunt
- Auto-attendant using ACD features

Two ACD front-end call-handler application options are available. A front-end call-handler application means that MICA answers the call and then presents menus that give customers multiple choices for call transfer, FAX, and other services. You can also handle calls differently route depending on the incoming number.

- Call routing by menus only
- Call routing by dialed number.

Software engineering

This section describes the X11 software package requirements for each MICA configuration. The number of available ports on the MICA depends on the software release installed in the Meridian 1. Install MICA in software releases X11 Release 21 and up, X81-ph7c and up. If the software is version X11 Release 22 and up, MICA supports up to 32 ports. Earlier versions support a up to 16 ports.

MICA ports defined as ACD agents require ACD packages and ACD resources. Take the ACD resources into account in the ISM (Incremental Software Management) customer configuration.

Customer definitions in Meridian 1 regarding the hunt feature apply if the circular hunt configuration is used. The Pilot DN feature requires the Pilot DN package, and Pilot DN operating parameters apply.

Activate the End-to-End Signalling feature to enable DTMF dialing from Meridian 1 proprietary sets. This applies even when the caller's set is in the same Meridian 1 switch as the MICA card.

Software requirements for Auto-attendant using circular hunt

- Digital Set package 88 (Release 22 required for more than 16 ports)
- ESS - Enhanced End to End Signalling package 10

Software requirements for Auto-attendant using ACD features

- Digital Set package 88 (Release 22 for more than 16 ports)
- ESS - Enhanced End to End Signalling package 10
- ACD basic package 45
- ACD Advanced features package 41

Software requirements for ACD front-end Call routing using menus

- Digital Set package 88 (Release 22 for more than 16 ports)
- ESS - Enhanced End-to-End Signaling package 10
- ACD basic package 45
- ACD advanced features package 41

Software requirements for ACD front-end call routing using DNIS

- Digital Set package 88 (Release 22 for more than 16 ports)
- Enhanced End-to-End Signaling package 10
- ACD basic package 45
- ACD advanced features package 41
- DNIS package 98

System resources

You must consider the use of system ACD resources. If applicable, you must review Incremental Software Management (ISM) for the specific Meridian 1 system option. Each MICA card requires an ACD DN that defines the ACD queue; each MICA port represents an ACD agent that requires a TN and a DN for Key 0 and a DN for Key 1. You can use a Multiple Appearance DN for the Key 1 DN.

If you do not use ACD, then each MICA port represents a 2616 set that requires a TN and a DN for system resources used Key 0 and a DN for Key 1. You can use a Multiple Appearance DN for the Key 1 DN.

For example, a MICA card configured to the maximum capacity of 32 ports requires the following system resources:

- 1 ACD DN assigned to the MICA card
- 32 TNs assigned to the 32 ports

Redundancy engineering rules

MICA redundancy requires the ACD configuration. You can define one MICA as a backup for another in the following manner:

- Define different ACD-DNs for the two MICAs.
- Define access numbers to the first ACD-DN, and define NCFW (Night Call Forward) on it to forward calls to the second ACD-DN.
- Download identical databases to both MICA PCMCIA disks.

Multiple card engineering rules

You can configure multiple MICAs to work together so that customers have more ports serving the same service numbers in the following manner:

- On the Meridian 1 define different ACD-DNs for the MICAs.
- Define different trunks from the same DNIS trunk group to terminate on a different MICA ACD. Or define another ACD queue with time overflow, distributing the calls between the different MICA ACDs, and have all trunks terminate on the Time Overflow ACD.
- Download identical databases to each MICA PCMCIA disks.

For more information, See "How to define a MICA service number" on page 31.

Personal verification recordings are *not* re-usable and must be made for each card. Define two different service DNs for recording purposes, with one leading to each MICA ACD-DN. The subscribers record their names twice, once on each card. You can copy personal verification recordings from one MICA PCMCIA disk to another.

Configuration engineering rules

The MICA administrator must know the language serial number in the customer's set. It serves as the language ID for MICA Telephone User Interface (TUI) recording. The language serial number can be derived from the BUI. In the Treatments window, when the list of languages is presented it is in the order of the languages in the customer set.

The Database for name dialing is one table. It holds to 10,000 entries on the hard disk and up to 1,000 in the Flash configuration. The database uses English spelling only. If you have a name dialing database that has more than 10,000 names, MICA only uses the first 10,000.

Only subscribers with DNs of up to seven digits can record personal verifications. Three seconds is the maximum length of a personal verification recording. In the hard-disk configuration, MICA supports personal subscriber recordings for up to 3000 subscribers. The Flash configuration does not support personal subscriber recordings.

If the caller selects name dialing and the input keys match more than one name, up to five names are announced. If there are more than five names with the same keypad spelling, those subscribers cannot be reached by name dialing.

In the Name Dialing Database, the maximum length of name is 20 characters, including the space between the last and first name. The maximum DN length in this database is 20 digits.

In the Call Screening Table, the DN prefixes defined may be up to 20 digits and there may be up to 100 entries in the table. The maximum length of the FAX DN is 20 digits.

Call transfer is subject to Meridian 1 limitations. For incoming calls on non-supervised trunks, Meridian 1 allows transfer completion only after the called party has answered. In this case the MICA will continue retry the transfer for up to 15 seconds. During this time, the caller is on hold and will receive the hold treatment defined in Meridian 1.

Customer may define up to 32 different service profiles (assigned to service DNs), which lead to 32 different menus and 32 different call screening tables, based on 16 different time types and 16 different CLID types, to a maximum of 26 CLID digits.

Flash customer may define up to 8 different service profiles (assigned to service DNs), which lead to 16 different menus and 8 different call screening tables, based on 16 different time types and 16 different CLID types, up to a maximum of 26 CLID digits.

External equipment requirements

There are three interfaces available to interact with the MICA:

- The Command Line Interface (CLI), for performing initial setup and configuration and performing upgrades
- The Browser User Interface (BUI), which uses a common web browser to create and manage services and treatments
- The Telephone User Interface (TUI), where you record greetings and menus

The following paragraphs describe the external equipment necessary to use each of these interfaces.

To access the CLI

A VT100 terminal or a personal computer emulating a terminal is used to perform MICA administration, configuration, maintenance, and diagnostic functions through the CLI.

For initial setup and configuration, connect the terminal to the MICA RS-232 interface or to the DB-9 connector on the NT5D52 Ethernet Adapter card installed on the I/O panel. For long-term administration and maintenance (through the CLI) telnet to the card over your LAN. Telneting requires the connection of the MICA card to the LAN through the RJ45 jack on the Ethernet adapter.

The terminal interface must be set to 9600 baud, 8 data bits, 1 stop bit, and no parity. The flow control is hard wired (never use XON/XOFF flow control).

To access the BUI

Access to the Browser User Interface (BUI) requires three things:

- a Local Area Network (LAN)
- a web server to house the BUI
- a web browser on a PC to access the BUI

LAN characteristics

Ethernet implementation over the MICA has the following LAN characteristics:

The Ethernet adapter options for MICA are:

- NT5D52AB for the IPE module
- NT5D52BB for the Option 11E/11C

The LAN administrator assigns the IP address for the MICA. The IP address is entered over the VT100 terminal during initial setup.

The PC you use to access the BUI must have the following requirements:

- minimum of 166 MHz PC Pentium processor
- minimum of 32 MB RAM
- minimum of 1 GB for the hard drive

Web browser characteristics

The BUI operates from a Java 1.1 level. This requires the user to have one of the following web browsers on his or her PC:

— Netscape 4.5 (or later)

— Internet Explorer 4.01 (or later) with Service Pack 1 (SP1)

About caller input

MICA accepts digit input while playing a greeting, so an experienced caller can immediately input the appropriate digit and reach the desired option.

In the TUI, the * key can send users to the previous menu. In voice menus, the default definition for the * key is to replay the previous menu.

For system menus, such as dial-by-name or dial-by-number, press the * key to return to the main menu as long as the system prompt is playing.

If you have custom menus, you can define a customized function for the * key.

Callers who use dial-by-number can press the # key twice to bypass the "call is being transferred to" announcement.

Callers who use dial-by-name can press 1 after name dialing to skip the announcement preceding the call transfer.

The # has specific meaning in name dialing and cannot be used to skip the announcement.

How to define a MICA service number

This section explains how to enter and define a service number.

You define service numbers on the Meridian 1 only for those numbers to be routed to the MICA card, and only numbers that will appear on the display of the MICA units, so MICA can recognize the number.

If the service number uses ACD queues with their night DNs NCFW forwarding to a MICA ACD queue, then MICA requires a dedicated ACD queue for each service and is Night Call Forwarded (NCFW) to the main card queue.

You can forward your phone to a MICA queue and build a service in the browser for your phone. You do not have to build a queue for every service. For example, you can forward a 1-800 number of a four-digit extension to a queue.

There are two ways that MICA ports may be defined on the Meridian 1, and each one has matching types of MICA service numbers that you can use.

MICA ports defined as ACD agents

Service numbers can be:

- ACD queues with no agents that have their night DN leading to the MICA card DN. The MICA ACD DN itself cannot be used if the MICA is to distinguish it as a specific number. It can be used to reach the MICA and will receive the Default Service treatment.
- DNIS on an incoming route auto-terminating on the MICA card ACD queue.

Both kinds of service numbers can be used simultaneously on the same MICA but not on the same call. If a call is received with DNIS, the DNIS is considered the service number. Otherwise, the service number is the dialed ACD DN.

MICA ports defined as 2616 sets in a hunt circle

In this configuration, you use one service number to access the MICA. All calls reach the default service. The number can be a pilot DN or the DN of one of the MICA ports.

If you require multiple access DNs, you can define more than one pilot DN/ hunt group leading to the same ports. Or you can define a phantom loop (this requires the PHTN software package) with phantom TNs leading to the MICA hunt circle.

Do not use the port DNs for multiple DN access and service differentiation.

You can forward any DN to MICA for Hunt and ACD options.

Install MICA card, adapter and cables

If you have never installed a Meridian 1 circuit card, read the Equipment Handling Guidelines section in the Meridian 1 Installation and Maintenance manual (365-3001-210).

Card and adapter description

The MICA is a single-slot IPE card. It emulates a digital line card in Meridian 1. The MICA requires serial and Ethernet connections. You install an adapter with TTY and Ethernet ports to provide these connections. In the IPE module, the adapter connects to the backplane cable that connects to the MICA card slot. In the Option 11 cabinet, the adapter plugs into the 50-pin I/O connector in the cabinet.

Prepare for installation

1. Select an IPE module card slot for MICA (see Table 4).
2. Locate the backplane I/O connector or cabinet connector for the slot. If you don't know how to find the I/O connector for your module, See "I/O panel slot charts" on page 199.
3. Assemble tools.
4. Locate adapter.
5. Make sure module or cabinet has anti-static wrist strap, or attach anti-static shoe straps.

Tools for adapter installation

You need these tools to install the adapter:

- 3/16th socket wrench
- small slotted screwdriver
- small Phillips screwdriver
- Ty-wrap cutter (only required if IPE module I/O panel has pre-installed Telco cables.)

Equipment compatibility

- Meridian 1 Options 21E, 51, 51C, 61, 61C, 71, 81, and 81C
- SL-1 systems NT and XT upgraded to support IPE cards
- Option 11E, 11C

Table 4 lists the Meridian 1 IPE modules and card slots suitable for MICA.

Table 4
MICA-compatible card slots

Meridian 1 modules	MICA card slots
NT8D37BA/EC IPE modules, NT8D11BC/ED CE/PE modules	All available IPE card slots.
NT8D37AA/DC IPE modules	0, 4, 8, and 12
NT8D11AC/DC CE/PE modules	0

Figure 1 describes the MICA controls, indicators and connectors. Figures 2 and 3 show the IPE module and Option 11 cabinet MICA adapters. The adapters provide the Ethernet and serial interface to MICA.

Figure 1
MICA controls, indicators and connectors

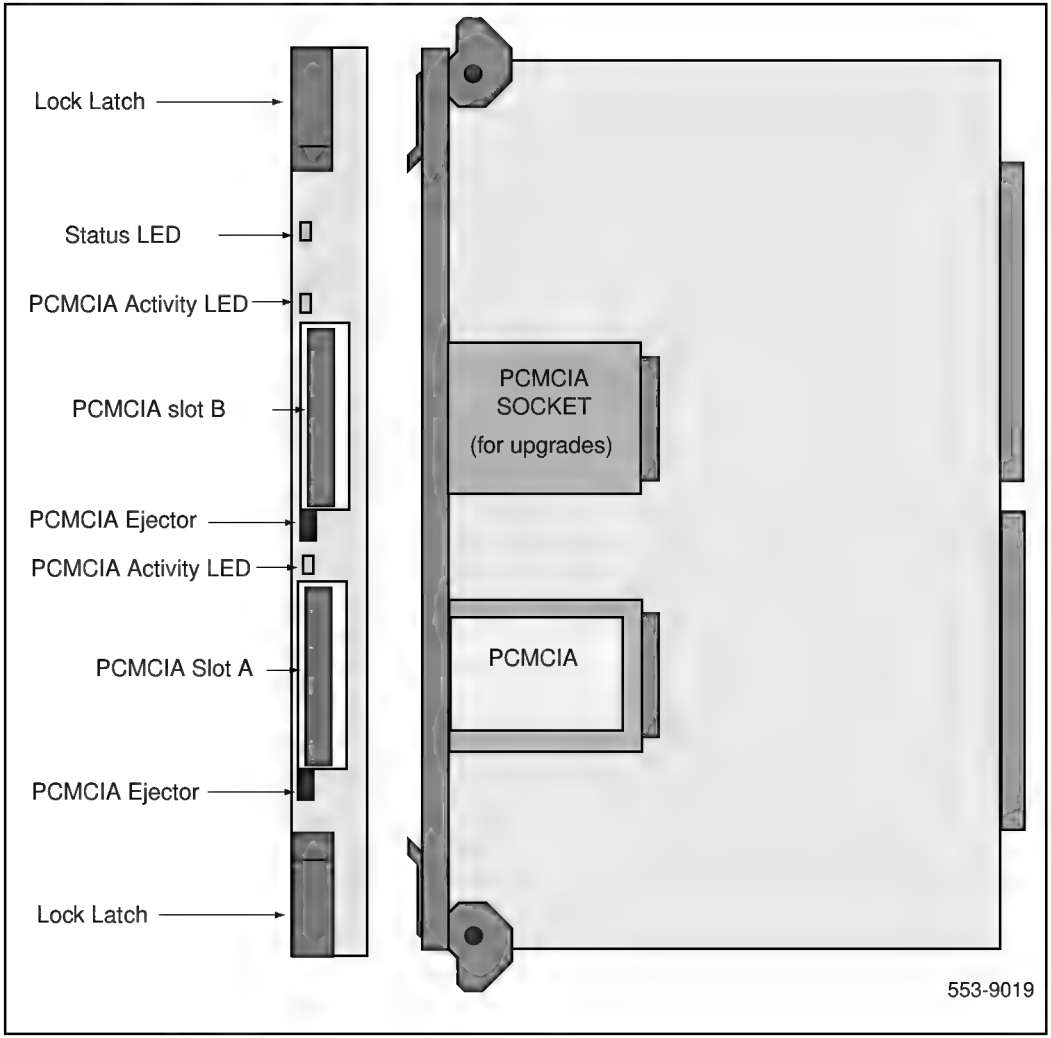


Figure 2
NT5D52 adapter for IPE modules

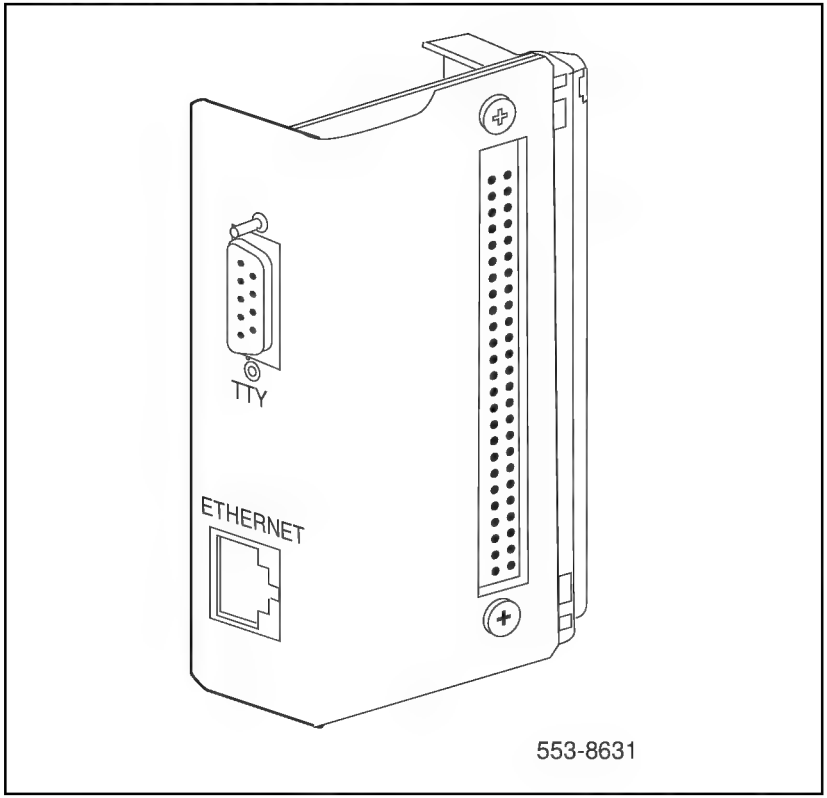
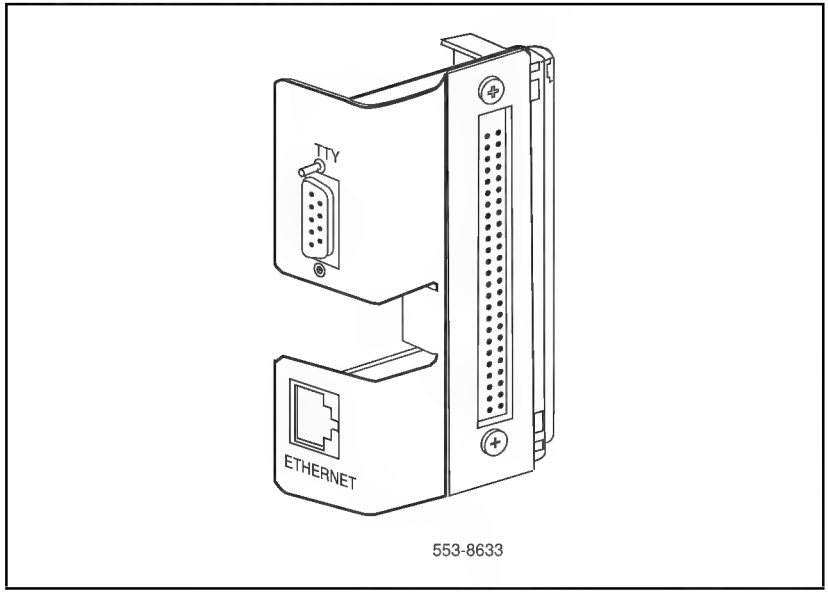


Figure 3
NT5D52 adapter for Option 11



Install MICA

1. Remove IPE module cover or Option 11 cabinet cover.
2. Attach anti-static wrist strap to your wrist or discharge static electricity on cabinet or module bare metal surface.
3. Select module or cabinet card slot according to work order or see Table 4.
4. Flip MICA top locking latch up and bottom locking latch down.
5. Insert MICA into card-aligning guides in card cage.
6. Gently push MICA into slot until you feel resistance.
7. Lock card in cardcage by simultaneously pushing ends of locking latches against faceplate.
8. If the module or cabinet is turned on, the MICA status LED and PCMCIA LED flash as MICA conducts a self-test. If self-test is successful, the PCMCIA LED goes out and the ENL/DIS LED remains ON until MICA is software-enabled in Overlay 32.

Install adapter in IPE module

CAUTION
Electrical Shock Hazard

You remove the I/O safety panel to install the adapter. This can expose you to high voltages (-48 Vdc) present in the IPE module backplane.

CAUTION

Do not drop fasteners into the Meridian 1 column. Loose metal hardware can cause serious power problems.

1 Identify I/O panel connector that corresponds to MICA card slot.

2 Remove I/O panel safety cover.

3 Use 3/16th socket wrench and slotted screwdriver to disconnect filter from I/O panel.

4 Pull filter and backplane cable through slot toward the backplane.

5 Unsnap the clips that connect filter to cable and discard filter (see Figure 4)

6 Use a small Phillips screwdriver to remove the two screws and washer from the adapter. Retain the screws and washers.

7 Plug adapter 50-pin connector into the backplane cable 50-pin connector. Press down on clips to snap adapter into place (see Figure 5).

8 Position the adapter in the I/O panel slot, with the TTY adapter on top.

9 Attach the adapter to the I/O panel using the two small screws and washers (see Figure 6).

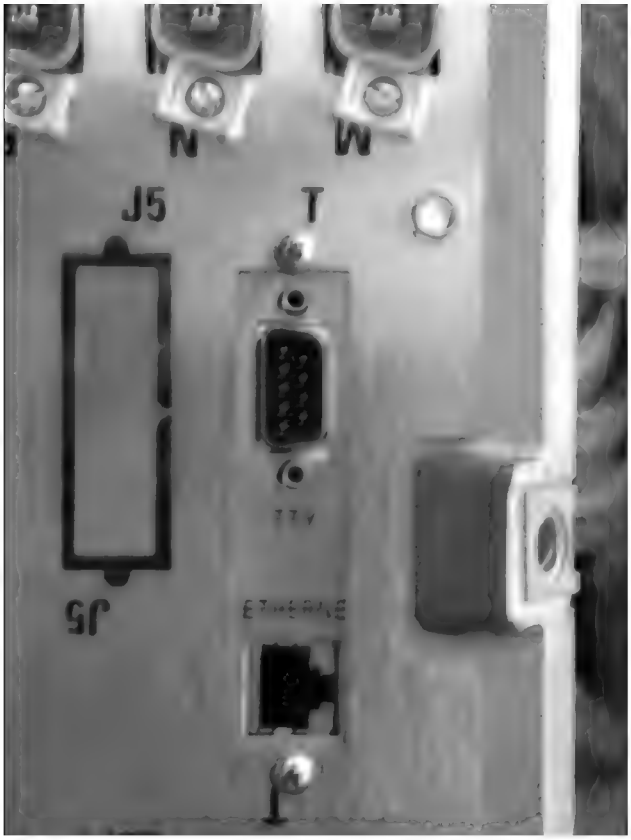
Figure 4
Disconnect filter from backplane cable

553-9075

Figure 5
Install adapter 50-pin connector in backplane 50-pin cable connector

553-9073

Figure 6
Install adapter in IPE module I/O panel



553-9074

Install adapter in Option 11 cabinet

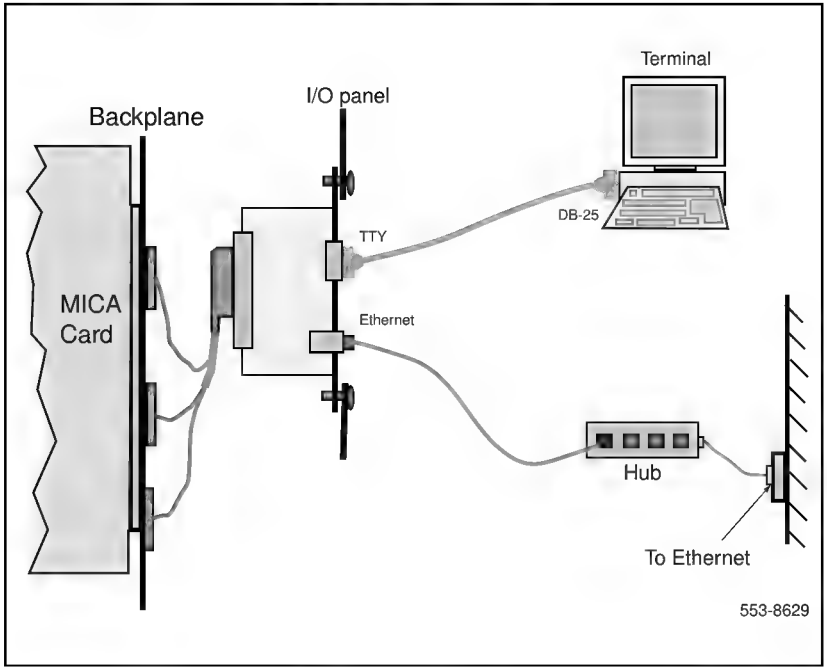
1. Remove cabinet cover.
2. Remove I/O panel protective strip.
3. Select I/O connector corresponding to slot containing MICA.
4. Plug 50-pin side of adapter into I/O connector. Be sure port labeled TTY is facing you and is on top.
5. Replace I/O panel protective strip when you finish installing adapters.

Connect local terminal and Ethernet cables to adapter

1. Connect a DB9 to DB25 cable from adapter TTY port to terminal serial port.
2. Configure the terminal or terminal emulation program settings:
   - 9600 baud
   - 8 data bits
   - 1 stop bit
   - no parity

   MICA displays the key code prompt on the terminal screen as soon as you connect the terminal to the adapter.
3. Connect an RJ45 cable from the adapter Ethernet port to the Ethernet hub (see Figure 7.)
4. Connect MICA to your network using standard Ethernet connection rules.

Figure 7
MICA local terminal and Ethernet connections



Connect a modem to the adapter

This procedure requires a modem, a 9-pin to DB25 cable, an RJ11 cable and a null modem, if required (see Figure 8.) See "Symptom: Unable to establish modem communications with MICA" on page 188 if you need help with modem settings. Table 5 describes the adapter pins.

Table 5
NT5D52 connector pin description

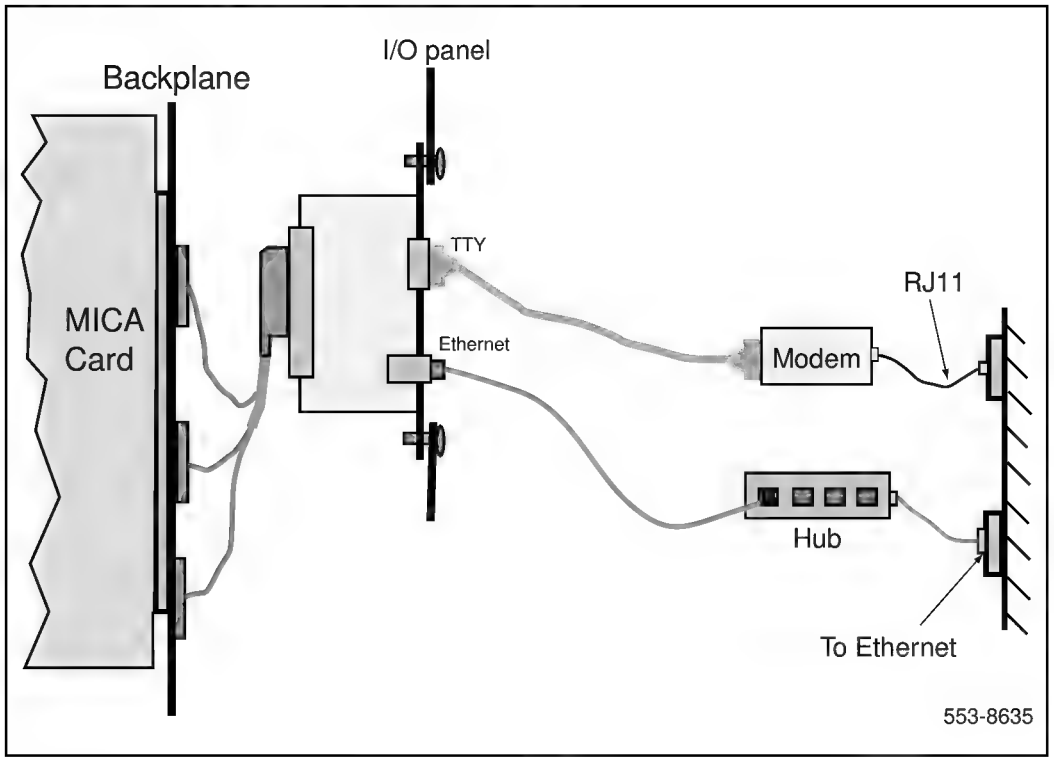
	Pin Number	Signal Description
9-pin serial connector	2	RS232 TX (transmit)
	3	RS232 RX (receive)
	5	GND (ground)
RJ45 Ethernet connector	1	LAN_TX +
	2	LAN_TX -
	3	LAN_RX +
	6	LAN_RX -

1 Connect cable between TTY adapter and modem. Use null modem if required.

2 Connect modem to phone plug.

3 Connect Ethernet cable to adapter (see Figure 8).

Figure 8
MICA modem and Ethernet connection example



Configure MICA initial settings

This procedure explains how to:

- Enter the MICA keycode to activate the MICA ports
- Login to the Command Line Interface
- Enter IP address information
- Set ACD parameters, if required

MICA IP address, subnet mask and gateway address requirements

Obtain the following information for each MICA from your network manager or other source:

- **IP address** - is the MICA Internet Protocol address. It has the same format as the gateway address.
- **subnet mask** - has XXX.XXX.XXX.XXX format, where every XXX is in the range 0-255. Subnet mask in binary presentation of 32 bits has at least the first eight digits "1" and the last digit is "0".
- **gateway address** - has XXX.XXX.XXX.XXX format, where every token is in the range 0-255.

Enter the key code and login

MICA displays a key code prompt screen the first time you install MICA and connect a terminal (see Figure 9). MICA requires a key code to activate the ports.

1. Establish a serial connection to MICA through the adapter TTY port. Set the terminal or computer terminal emulation program to the following parameters: Transmission speed: 9600 bps; Data bits: 8; Stop bit: 1 Parity: No; Flow control: none (Do not use XON/XOFF flow control).
2. Locate the key code label in the MICA shipping carton.
3. At the **Modify, Save, Cancel:** prompt, type **M** and press Return.
4. At the **max ports(0):** prompt, type in the number of MICA ports listed on the keycode label and press **Return**.
5. At the prompt **Modify, Save, Cancel:** prompt, type **S** and press Return.
6. Type in keycode1, then press Return. Type in keycode2, press Return. Type in keycode3, then press **Return.**
7. At the prompt **Modify, Save, Cancel:** prompt, type in **S** and press Return.
8. MICA continues the start-up process and displays the Command Line Interface (CLI) login screen (see Figure 10). At the login prompt, type **user** and press Return.

Figure 9
MICA key code screen example

```
Modify, Save, Cancel: M

max ports( 0 ): 8
Modify, Save, Cancel: S

Enter key-code1(8 characters): 12345678

Enter key-code2(8 characters): 11223344

Enter key-code3(8 characters): 99887766
```

Figure 10
Command Line Interface login screen

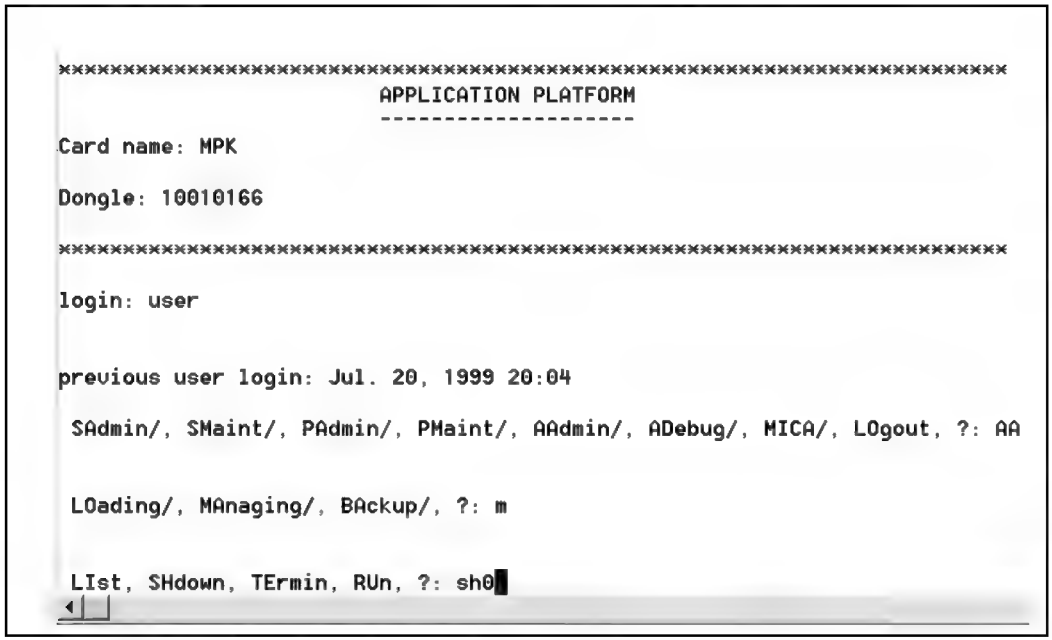
```
********************************************************************************

login: user

previous user login:
 SAdmin/, SMaint/, PAdmin/, PMaint/, AAdmin/, ADebug/, MICA/, LOgout, ?:
```

Disable "Acquire Failed" prompts

MICA displays "Acquire Failed" prompts the first time you log in because the card is not enabled. To disable the prompts, perform steps 1-4 (see Figure 11).

1. At the CLI Main Menu prompts - SAdmin/, SMaint/, PAdmin/, AAdmin/, ADebug/, MICA/, LOgout, ?: enter AA
2. At the prompt - LOading/, MAnaging/, BAckup/,?: enter m
3. At the prompt - LIst, SHdow, TErmin, RUn,?: enter sh 0
4. Press /, to return to the CLI Main Menu.

Figure 11
AAdmin menu



Enter IP address for non-ACD configuration

1 At the CLI Main Menu prompt (see Figure 12):

   a select **MICA** and press Return

   b Select **SA** and press Return

   c Select **SY** and press Return

2 At the prompt **card name:** enter up to ten characters to change the default card name for MICA, if required.

3 At the prompt **subnet mask:** enter the subnet mask data.

4 At the prompt **gateway address:** enter the gateway address.

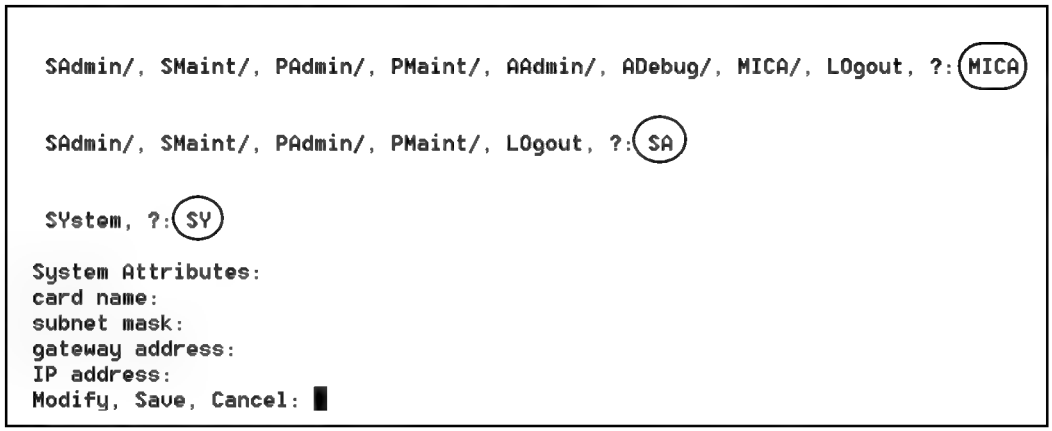
5 At the prompt **IP address:** enter the IP address.

6 At the prompt **Modify, Save, Cancel:** type **S** and press Return.

7 At the prompt **Restart AP? (Yes, (No))** type **Y**.

8 The MICA automatically restarts

Figure 12
Enter IP address - non-ACD configuration



Enter IP address and ACD settings for ACD configuration

In this procedure, you select SA/SY directory from the CLI main menu (see circled items in Figure 13). MICA presents a window that contains 18 prompts. You only respond to the prompts listed below, which are highlighted by a square box in Figure 13:

- card name (change card name if desired)
- card_acd: Press return to set ACD definitions. The default setting is Y.
- Agent ID: if you use Agent ID, enter the first number of the Agent ID. For example, if you have a group of 32 agent IDs that begins with 2000, enter 2000
- Multiple queue: Enter a Y or N
- subnet mask:
- gateway address:
- IP address:

IP address and ACD settings procedures

1 Login to MICA. At the main menu prompt (refer to Figure 13 on page 51):

   a select **SA** and press Return

   b Select **SY** and press Return

2 At the prompt **card name:** enter up to ten characters to change the default card name for MICA, if required.

   Press **Return** until you reach **card_acd**

3 At the prompt **card_acd:** press Return if you use ACD, or enter N if you use Hunt.

4 At the prompt **agent ID:** enter the first number of the Agent ID group

5 At the prompt **acd multiple queue:** enter Y or N.

   Press **Return** until you reach **subnet mask.**

6 At the prompt **subnet mask:** enter the subnet mask data.

7 At the prompt **gateway address:** enter the gateway address.

8 At the prompt **IP address:** enter the IP address.

9 At the prompt **Modify, Save, Cancel:** type **S** and press Return.

10 At the prompt **Restart AP? (Yes, (No))** type **Y**.

11 MICA automatically restarts.

Figure 13
Enter IP address and ACD settings

```
SAdmin/, SMaint/, PAdmin/, PMaint/, AAdmin/, ADebug/, MICA/, LOgout, ?: SA

SYstem, CAT, USDN, CADence/, ?: sy

System Attributes:
card name: MPK
idle timeout minutes: 20
report aging days: 7
short occupancy seconds: 5
card_acd : defined
agent id: not defined
acd multiple queue: no
revert dn:
application traffic report hours: 0
default coding law: Mu_law
complete trnsf delay seconds: 1
number of charge digits: 23
subnet mask: 255.255.240.0
gateway address: 47.82.32.1
IP address: 47.82.45.97
DBG IPaddress:
DBG port: not defined
CAS IPaddress:
Modify, Save, Cancel:
```

Prepare to configure MICA

In this section, you learn how to prepare for MICA configuration. You configure MICA in two steps:

Step 1 - Build phone sets in LD11, build the ACD queue in LD23 (if you use the ACD applications) and software-enable MICA in LD32.

Step 2 - Login to the MICA Browser User Interface (BUI) and build treatments for MICA service(s). A MICA treatment contains a set of instructions that tell MICA how to handle a call to a MICA service DN.

Preparation tasks

1 Select a MICA application

MICA supports two Auto Attendant application options. Auto-attendant means that MICA answers the incoming call and presents the customer with the option to dial-by-name, or dial by number to set up a call transfer. The two options are:

- Auto-attendant using circular hunt
- Auto-attendant using ACD features

Two ACD front-end call-handler application options are available. A front-end call-handler application means that MICA answers the call and then presents menus that give customers multiple choices for call transfer, FAX, and other services. You can also handle calls differently route depending on the incoming number.

- Call routing by menus only
- Call routing by dialed number.

2 Verify that you have the required software packages to support your MICA application. See "Software engineering" on page 24.

3 If you use Agent ID, get a block of sequential Agent IDs. The quantity of Agent IDs equals the amount of MICA ports.

4 If you use ACD scheduled data blocks, then the agent IDs must be consecutive numbers within the lower and upper limit starting with the number assigned to the first agent ID. If you use Agent ID, MICA ports do not login until you enter ACD definitions in the Properties window of the Browser User Interface.

5 If you use ADS or SCB, the maximum number of agents who are allowed to login at once must also be adjusted to allow the MICA agents to login. This is done in the LOG prompt in the SCB or ADS block.

6 Find out if you use Multiple Queue Assignments (MQA).

7 Decide if you will use the RPRT in LD23. You cannot change these settings once you build your phones. If the RPRT is set to NO, it is not necessary to set MQA on MICA to YES.

Configuration guidelines

1 Define the ACD block. The administrator can define RAN routes, timers, overflow and other attributes.

2 Define access DNs:

- ACD queues with no agents, their night DN leading to the ACD DN defined in the first step, or
- Define an incoming route with DNIS, and its trunks auto-terminating on ACD defined in the first step.

3 Define each unit of the card as a digital set (2616), agent of the ACD DN defined in the first step. Define keys as:

- Key 0 - ACD
- Key 1 - SCN (Single Call Not-Ringing) with a dedicated DN.
- Key 2 - NRD (Not Ready)
- Key 3 - MSB (Make Set Busy)
- Key 4 - TRN (Transfer)

4 Consider that MICA handles call transfer screening when you define access restrictions.

5 If only a subset of the card's units are configured, they should always begin from unit 0 and on. In release 22 and up, you can configure units 17-31 as voice units.

6 After defining all ports, enable the card.

Configure MICA in Meridian 1 - non-ACD

These procedures explain how to configure MICA ports as digital sets and enable the MICA if you have a non-ACD configuration. Follow the prompts and responses in Table 6 to configure each MICA port as a digital set. In LD 11, do not define Calling Name Allowed (CNA) on the MICA port. Use the default setting Calling Name Denied.

Table 6
LD 11 (Part 1 of 2)

Prompt	Response	Description
REQ:	NEW	Add new data.
TYPE:	2616	M2616 Digital Touchphone. Release 7 & later.
TN	l s c u	Terminal number. l = loop, s = shelf, c = card, u = unit for Options 51C - 81C. c = card, u = unit for Option 11C.
CUST	xx	Customer number associated with this set.
CLS		Class of Service options.
	FLXA	Flexible voice/data Allowed. Used for ports 16-31 on a 32-port card.
	(VCE)	Voice Terminal.
	(WTA)	Warning Tone Allowed.
HUNT	x...x	Hunt DN of next station in hunt chain.
EHT	x...x	External Hunt DN (optional).

Table 6
LD 11 (Part 2 of 2)

Prompt	Response	Description
LHK	(0) -69	Last Hunt Key number limit.
KEY	0 SCR <DN>	Single Call Ringing.
KEY	1 SCN <DN>	Single Call Non-Ringing.
KEY	3 MSB	Make Set Busy. ***Note:*** KEY 2 is not used.
KEY	4 TRN	Transfer.

Enable MICA

Load LD32 to enable MICA:

LD 32	to load the program
ENLC l s c	l s c - l=loop, s=shelf, c=card
********	to exit the program

Check the configuration

Load LD20 to check the configuration.

LD 20	to load the program
REQ	PRT
TYPE	TNB
TN	l s c, where l=loop, s=shelf, c=card
********	to exit the program

Configure MICA in Meridian 1 - using ACD

These procedures explain how to build an ACD queue, build the ACD agents and enable the MICA.

> ***Note:*** Be sure to read "Prepare to configure MICA" on page 55 before you configure the ACD queue and agents.

You define Agent ID and other parameters in the Browser User Interface or the Command Line Interface. You must define the settings or the ACD agents cannot log in.

Determine sequential Agent ID numbers, MQA settings

If your application uses Agent ID, perform steps 1 and 2. If you do not use Agent ID, start with step 2.

1 If your application uses Agent ID, determine a new range of sequential four-digit Agent ID numbers for MICA. You may use CPND for queues forwarded to the MICA queue. The quantity of Agent IDs required depends on the number of MICA ports you purchased. The number of ports is printed on the keycode label. For example, if you have an 8-port MICA, you need eight **sequential** four-digit Agent ID numbers.

2 If you use MQA, do not define Calling Party Name Display (CPND) for the ACD queue used for MICA. If you do not use MQA, you can use CPND. Use Overlay 23 to find out the Agent ID range that exists and to find out the Multiple Queue Agent (MQA) settings (MQA=yes or MQA=no):

LD 23	to load the program
REQ	PRT
TYPE	SCB or ADS, depending on your application. SCB - Schedule data Block for ACD Management Reports ADS - Auxiliary Data System data block ***Note:*** Determine the maximum number of agents that can be logged in, including queues and voicemail.
********	to exit the program

Determine ACD agent DN range and assign queue DN

1 Determine a group of unused DNs for your ACD agents equal to the number of ports you purchased:

LD 22	to load the program
REQ	PRT
TYPE	LUDN - List Unused Directory Numbers
********	to exit the program

2 Determine the MICA queue DN.

Build an ACD queue in LD23

1 Open Overlay 23.

2 Build the ACD queue for MICA. Figures 14 and 15 show an example of an ACD queue programmed in LD23. The prompts and responses are highlighted with a black square.

Table 7
LD 23 Build an ACD queue

Prompt	Response	Description
REQ	NEW CHG PRT	Add new data Change existing data Print data.
TYPE	ACD	Automatic Call Distribution
CUST	xx	Customer number associated with this data block.
ACDN	x...x	ACD Directory Number assigned to the MICA card. This is the ACD queue DN. Up to four digits, up to seven digits with Directory Number Expansion (DNXP) package 150.
MAXP	xx	Maximum Number of Agent Positions. This number equals the maximum available ports on **MICA**. MAXP value can be increased to the allowed maximum or decreased to the current agents.
	1-500 1-1000 1-1200	For NT and Options 51 and 61 For XT For Option 71 and 81.
RPRT	(YES) NO	Management reporting and status display.

Figure 14
LD 23 sample configuration for MICA (Part 1 of 2)

```
>LD 23
ACD000
MEM AVAIL: (U/P): 4866496    USED: 1850943    TOT: 6717439
DISK SPACE NEEDED: 751 KBYTES
2MB BACKUP DISKETTE(S) NEEDED: 1  (PROJECTED LD43 - BKO)
ACD DNS  AVAIL:   889    USED:   111    TOT:  1000
REQ  PRT
TYPE ACD
CUST 0
ACDN 4004

TYPE ACD
CUST 0
ACDN 4004
MWC  NO
DSAC NO
MAXP 32
SDNB NO
BSCW NO
ISAP NO
AACQ NO
RGAI NO
ACAA NO
FRRT
SRRT
NRRT
FROA NO
NCFW
FNCF NO
FORC NO
RTQT 0
SPCP YES
OBTN NO
```

Figure 15
LD 23 sample configuration for MICA (Part 2 of 2)

```
RAO  NO
CWTH 1
NCWL NO
BYTH 0
OVTH 2047
TOFT NONE
HPQ  NO
OCN  NO
OVDN
IFDN
OVBU LNK LNK LNK LNK
EMRT
MURT
RTPC NO
HOML YES
RDNA NO
ACNT
NRAC NO
DAL  NO
RPRT YES
RAGT 4
DURT 30
RSND 4
FCTH 20
CRQS 100
IVR  NO

MEM AVAIL: (U/P): 4866496    USED: 1850943    TOT: 6717439
DISK SPACE NEEDED: 751 KBYTES
2MB BACKUP DISKETTE(S) NEEDED: 1  (PROJECTED LD43 - BKO)
ACD DNS  AVAIL:   889    USED:   111    TOT:  1000
REQ  END
```

Build ACD agents

In LD 11, do not define CNA on the MICA port. Use the default setting Calling Name Denied.

1 Open Overlay 11 to configure ACD agents. See Table 8.

2 Repeat the steps in Table 8 for each ACD agent

Table 8
LD 11 ACD agent configuration (Part 1 of 2)

Prompt	Response	Description
REQ:	NEW	Add new data.
TYPE:	2616	M2616 Digital Touchphone. Release 7 & later.
TN	l s c u	Terminal number. l = loop, s = shelf, c = card, u = unit for Options 51C - 81C. c = card, u = unit for Option 11C.
CUST	xx	Customer number associated with this set.
CLS		Class of Service options.
	FLXA	Flexible voice/data Allowed. Used for ports 16-31 on a 32-port card.
	(VCE)	Voice Terminal.
	(WTA)	Warning Tone Allowed.
KEY	0 ACD <ACD DN> <POS DN>	Automatic Call Distribution. ***Note:*** In Release 22 and above, you need to input a 0 in between the queue and the Position ID.
KEY	1 SCN	Single Call Non-Ringing with a dedicated DN.
KEY	2 NRD	Not Ready key. AGN class of service must be assigned.

Table 8
LD 11 ACD agent configuration (Part 2 of 2)

Prompt	Response	Description
KEY	3 MSB	Make Set Busy.
KEY	4 TRN	Transfer

Enable the MICA

Open Overlay 32 and software-enable the MICA card:

LD 32	to load the program
ENLC l s c	l s c - l=loop, s=shelf, c=card
****	to exit the program

Check the configuration

Open Overlay 20 to check the MICA configuration. Figures 16 and 17 show a sample Overlay 20 printout of a configured MICA card.

LD 20	to load the program
REQ	PRT
TYPE	TNB
TN	l s c, where l=loop, s=shelf, c=card
****	to exit the program

Figure 16
LD20 MICA Configuration (part 1 of 2)

```
>LD 20

PT0000
REQ: PRT
TYPE: TNB
TN   76 0 8 0
SPWD
DATE
PAGE
DES

DES  MICA
TN   076 0 08 00
TYPE 2616
CDEN 8D
CUST 0
AOM  0
FDN
TGAR 1
LDN  NO
NCOS 0
SGRP 0
RNPG 0
SCI  0
SSU
XLST 0
SCPW
CLS  CTD FBD WTA LPR MTD FND HTD ADD HFD
     MWD LMPN RMMD SMWD AAD IMD XHD IRD NID OLD VCE DRG1
     POD DSX VMD CMSD CCSD SWD LND CNDD
     CFTD SFD DDV CNID CDCA MSID DAPA BFED RCBD
     ICDD CDMD MCTD CLBD AUTU
     GPUD DPUD DNDD CFXD ARHD FITD CNTD CLTD ASCD
     CPFA CPTA ABDD CFHD FICD NAID BUZZ AHD
     DDGA NAMA
     USRD ULAD RTDD RBDD RBHD PGND OCBD FLXD FTTC DNDY DNO3
```

Figure 17
LD20 MICA Configuration (part 2 of 2)

```
CPND_LANG ENG
HUNT
PLEV 02
SPID NONE
AST
IAPG 0
AACS NO
ITNA NO
DGRP
PRI  01
DNDR 0
KEY  00 ACD 4004 0  4939210
         AGN
     01 SCN 4939250 0     MARP
     02 NRD
     03 MSB
     04 TRN
     05
     06
     07
     08
     09
     10
     11
     12
     13
     14
     15
DATE  8 APR 1999


NACT END
```

MICA application examples

This section gives examples of three MICA applications.

Example 1 - An ACD menu-driven application

In Example 1, MICA is installed at City Power, a utility company. MICA answers calls with a customized greeting, plays menus to callers and routes calls depending on keypad digits entered by customers.

City Power Inc. provides a single phone number for sales, service, incoming faxes and emergencies. A customer finds that an AC power line has fallen off a pole during a storm and is live and sparking in her back yard. She calls the company at 1(800) 234-1000 and is greeted by an announcement from MICA:

"Welcome to City Power.

For Sales press 1

For a Service Emergency press 2

For normal Service press 3

For name dialing press 4

If you know the extension number press 5

When the customer presses 2, MICA routes the call to an emergency service technician. When the customer selects "1" for Sales, MICA plays a menu script telling customers to press 1 for commercial sales and 2 for residential sales. Then they are placed into an ACD queue.

Example 2 - ACD front-end call handler using DNIS

In these ACD call center scenarios, all incoming call center trunks are auto-terminated to one or more MICAs, depending on the number of incoming trunks. MICA plays specific greetings and menus and routes calls based on information provided by the Dialed Number Identification Service (DNIS).

Customer A calls 1-800-555-2000 to buy a Moore Super Vacuum Cleaner as advertised on television. The trunk they are terminated on (route 1 unit 3) is auto-terminated to a MICA port. MICA sees the incoming DNIS 1-(800)-555-2000 and plays a special message:

> "Thank you for calling the Moore Super Vacuum Cleaner order desk. Please hold for the next available operator"

The call is then placed into an ACD queue.

Customer B calls 1-800-222-3000 to buy a pair of Moore Super Boots as advertised on television. The trunk they are terminated on (route 1 unit 3) is auto-terminated to a MICA port. MICA sees the incoming DNIS (800) 222-3000 and plays a special message:

> "Thank you for calling the Moore Super Boots order desk. Please hold on to order your new boots."

The call is then placed into an ACD queue.

Example 3 - ACD front-end call handler using DNIS and CLID

Customer A in Quebec, Canada wants to buy a Moore Super Vacuum Cleaner as advertised on television. She calls 1-800-555-2000 from her home phone (514) 321-1234. The trunk she is terminated on (route 1 unit 3) is auto-terminated to a MICA port. MICA sees the incoming CLID of (514) 555-1234 and the DNIS 1-(800)-555-2000 and plays a special French message:

> "Thank you for calling the Moore Super Vacuum Cleaner order desk. Please hold for the next available operator"

The call is then placed into an ACD queue. MICA transmits CLID information so the call is answered in French.

Customer B in Toronto, Canada wants to buy a Moore Super Vacuum Cleaner as advertised on television. He calls 1-800-555-2000 from his home phone (416) 321-1234. The trunk they are terminated on (route 1 unit 3) is auto-terminated to a MICA port. MICA sees the incoming CLID of (514) 555-1234 and the DNIS 1-(800)-555-2000 and plays an English message:

> "Thank you for calling the Moore Super Vacuum Cleaner order desk. Please hold for the next available operator"

The call is then placed into an ACD queue. MICA transfers the call to an English speaking agent. MICA transmits CLID information so the call is answered in English.

BUI configuration summary

The MICA Browser User Interface (BUI) is a Web server installed on the MICA PCMCIA. You access the BUI using Netscape or Microsoft Internet Explorer.

You configure the MICA BUI in three steps:

1. Set Properties and Special Days (usually done once during initial MICA installation and configuration).
2. Create services and assign treatments that tell MICA how to handle incoming calls to the services.
3. Import, create or modify a name dialing database.

Properties procedure summary

Login to MICA, click the **Properties** tab and configure four types of properties:

- General: Settings in this tab include Time-out periods, the number of dialed digits allowed in a valid DN, enabling Personal Recorded messages for all users and setting the Voice Mail, Operator.
- Administration: Includes Interface Passwords, and login window title.
- Card: Displays the card's identity and version, and allows you to set ACD-related data.
- Reports: Determine which statistical reports to collect for MICA and how long to keep the reports.

Special days procedure summary

Login to MICA, click the **Special Days** tab and configure Holidays, Vacations and any Special Day as required. You also define Weekdays and Holidays.

Service configuration procedure summary

When you configure a service, you define the parameters MICA uses to handle customer calls.

Name dialing database procedure summary

You use Name Dialing tab in the BUI to:

- import a name dialing database
- create a name dialing database
- edit a name dialing database

How to login to the Browser User Interface (BUI)

These procedures explain how to login to the MICA Browser User Interface (BUI).

PC requirements

The PC you use to access the BUI must have the following requirements:

- minimum of 166 MHz PC Pentium processor
- minimum of 32 MB RAM
- minimum of 1 GB for the hard drive

Web browser characteristics

The BUI operates from a Java 1.1 level. This requires the user to have one of the following web browsers on his or her PC:

- Netscape 4.5 (or later)
- Internet Explorer 4.01 (or later)

How to login to the MICA BUI

1. Open your web browser.
2. Enter the MICA IP address in the following format, where x represents your IP network address for MICA (see Figures 18 and 19):

   http://xx.xxx.xxx/mica_bui.html
3. The MICA Login window appears (see Figure 20). Enter the default login and password and press Return or Enter.
   - Login - admin
   - Password - 000000
4. You can change the default Login and Password in the Properties Administration tab.

Figure 18
Enter MICA IP address in Netscape

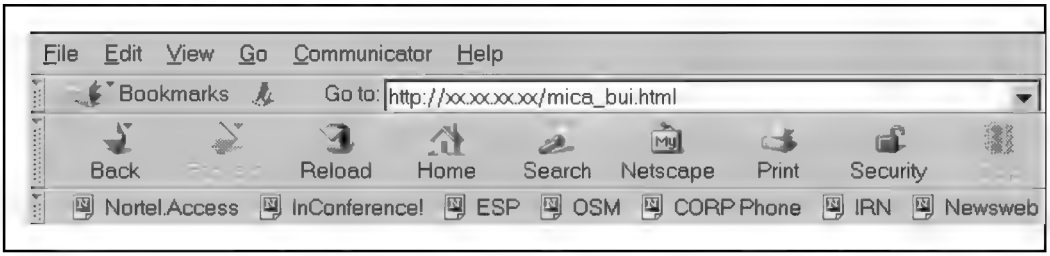


Figure 19
Enter MICA IP address in Internet Explorer

Figure 20
MICA Login window

Define Properties and Special Days

These procedures explain how to set MICA properties and define Special Days.

Define Properties

In this step, you set four MICA card properties:

- General: Settings in this tab include Time-out periods, the number of dialed digits allowed in a valid DN, enabling Personal Recorded messages for all users and setting the Voice Mail, Operator.
- Administration: Includes Interface Passwords, and login window title.
- Card: Displays the card's identity and version, and allows you to set ACD-related data.
- Reports: Determine which statistical reports to collect for MICA and how long to keep those reports.

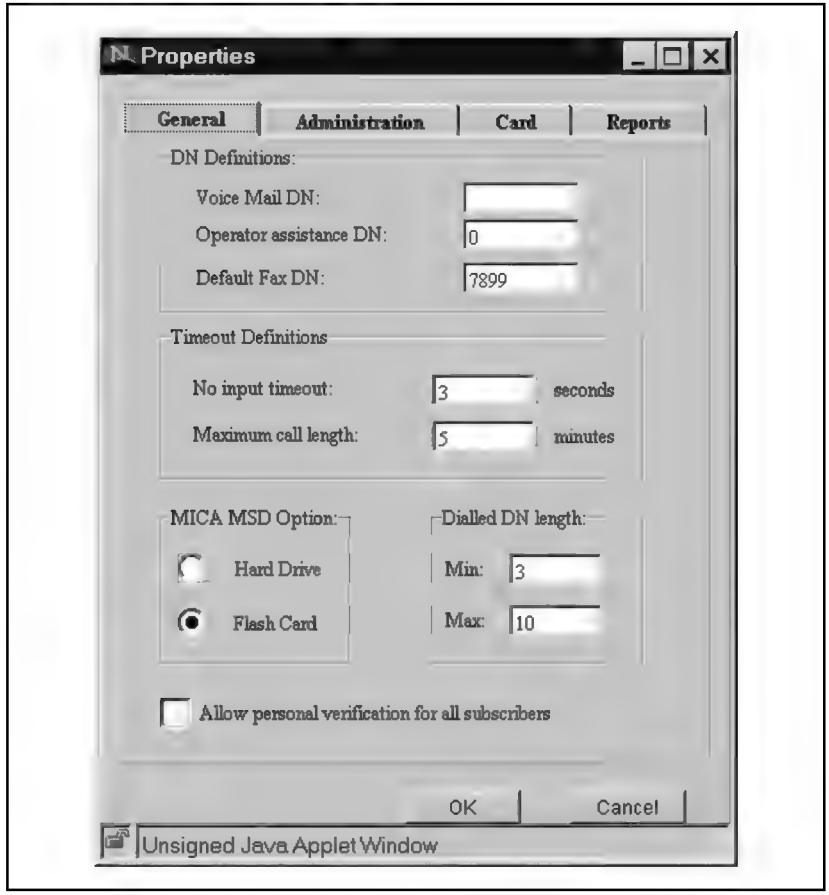
Note: Set the Properties in all four windows and then press OK.

Configure the General Properties window

1. Login to MICA.
2. From the Main window, press the **Properties** button. The **Properties** window **General** tab appears. See Figure 21.
3. Set the MICA card **DN definitions** for Voice Mail, Operator Assistance and Default FAX. These settings define transfer destinations for received calls. DN transfer destinations are left empty, if they are not assigned. Enter up to 20 digits
4. Set **Timeout Definitions**. **Maximum call length** defines the time period before the call receives the Timeout Action defined for **Call duration** in the **Voice Menus Options** tab. Range is 1-20 minutes.

   No input time-out defines the time period that the system waits for caller input before it takes the preset Timeout Action defined for **No action** in the **Voice Menus Options** tab. Range is one-ten seconds. MICA also recognizes this setting as the length of time used as **interdigit timeout** for name and number dialing.
5. Set **Dialed DN** length parameters to set the number of digits allowed in a valid DN when the caller uses dial-by-number. This can provide an additional security check. DNs with fewer than the defined minimum or exceeding the defined maximum number of digits are disqualified. DN digit range is 1-32.
6. Allow or deny **Personal Verification for all subscribers.** Clicking on this dialog box displays a check mark and sets the Personal Recording option for all users. If this global option is not checked, Personal Recording must be Allowed or Denied to each user in the Name Dialing Database displayed on the Name Dialing Edit window. If you have a database with more than 3,000 names, do not click this box. The Flash configuration maximum database size is 1,000 names.

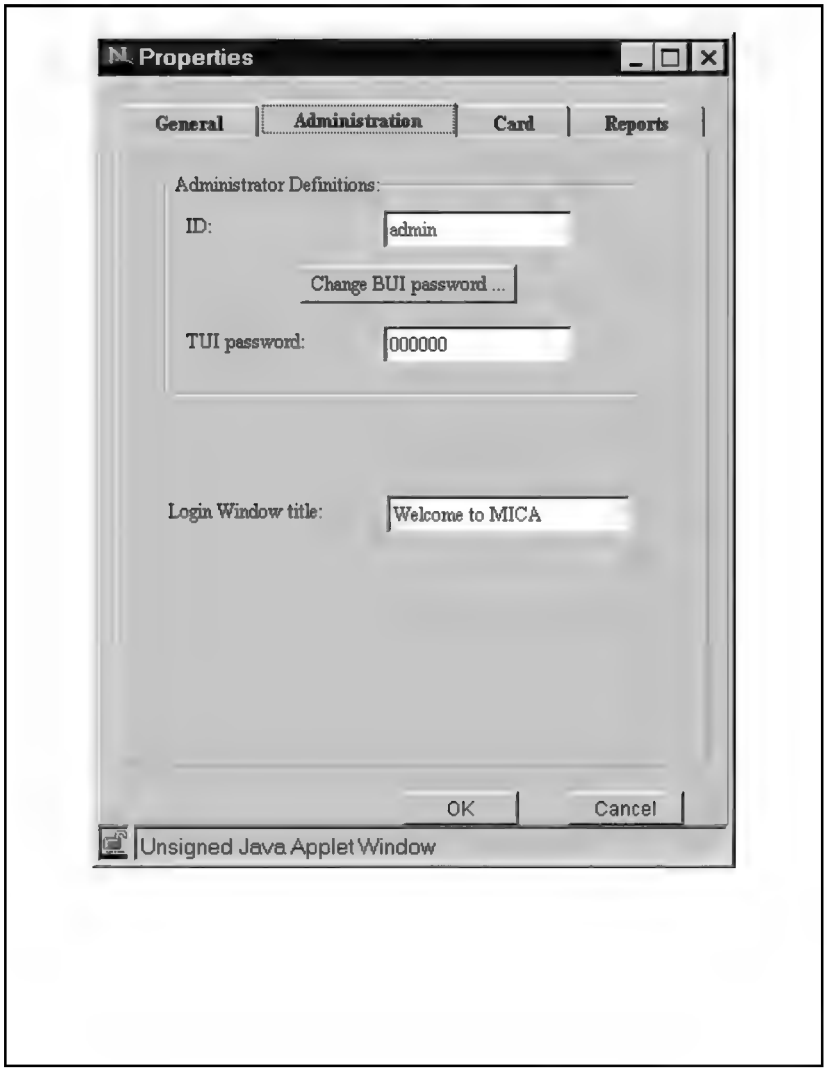
Figure 21
Properties window General tab



Set Administration Properties

1 Click the **Administration** tab. See Figure 22.

Figure 22
Properties window Administration tab



Set Card Properties

1 Click on the **Card** tab. See Figure 23.

2 Set **Administrator Definitions**

— **ID** - Defines login ID of the BUI user. Enter up to 20 characters and/or digits. The default is set to admin.

— **Change BUI password** - Press this button to open the Password Change dialog box. Enter up to six characters and/or digits to replace the default password of six zeros (000000).

— **Change TUI password** Enter up to six digits to replace the default digit string 000000**.**

3 If required, change the default MICA card name. Enter up to 20 characters and/or digits. The new card name is displayed in the main window's title the next time you login to MICA.

4 Card version information is for viewing only and cannot be changed.

5 If you did not set ACD parameters in the CLI, set ACD parameters in this step. The ACD parameters are for ACD setup, and must match the configuration in Meridian 1.

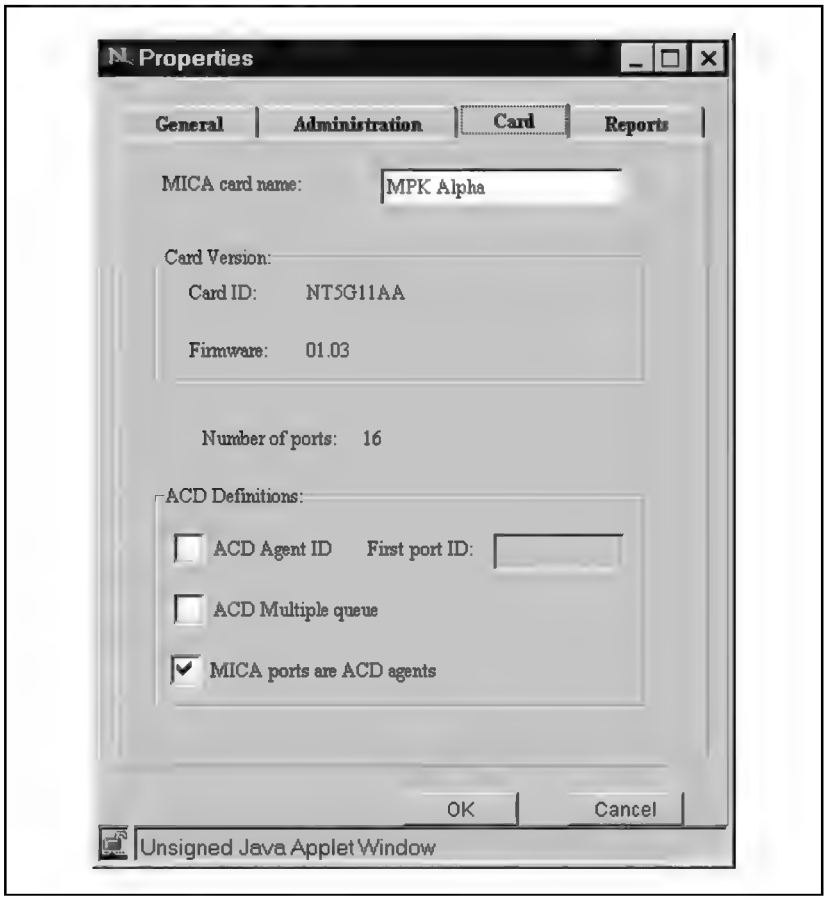
Note: If you make and save changes to ACD settings in the BUI, the CLI reflects the changes.

— Agent ID - Click in the box if your ACD is configured with agent-ID option. The '**First port ID'** box turns white. Enter the *first* agent ID reserved for MICA ports (length is four digits). This field corresponds to the **agent ID** prompt in the CLI.

— ACD multiple queue - should be selected if customer's ACD is configured with multiple-queue option. This field corresponds to the **acd multiple queue:** prompt in the CLI.

— MICA ports are ACD agents - indicates whether MICA ports are defined in Meridian 1 as ACD agents or plain 2616 sets. This field corresponds to the **card_acd:** prompt in the CLI.

Figure 23
Properties window Card tab



Set Reports Properties

MICA provides traffic peg reports and log reports.

Traffic Reports consist of special counters that are counted hourly, stored in special files on the PCMCIA disk on a daily basis and displayed in the BUI.

These events are pegged on the MICA:

1 Total calls - number of incoming calls.

2 Recording/Administrator calls.

3 Incoming FAX calls.

4 Name dialing attempts.

5 Number dialing attempts.

6 Average service time. This data is obtained indirectly: "Total service time" is counted as a peg, which is incremented not by one, but by actual call length. BUI calculates "Average service time" as "Total service time" "Total calls" when displaying average service time.

7 Successful call transfers.

8 Failed call transfers: busy number, wrong number, others.

9 Name not found failures.

10 Caller disconnected before system transferred his call

11 Screening violations.

12 Service time exceeded.

13 Switch language

The number of calls to each service is pegged, and displayed as separate pegs. Log reports are records of events, which are registered whenever they occur. The registration is done chronologically: the first event is first registered.

Log Reports are stored in special files on the PCMCIA disk on a per day basis and displayed via BUI. Logger events coming from calls to different services are registered together, in the same files.

The following events are reported whenever they occur (log reports):

1 CP Screening violation: screening violation: a caller attempted to have his/her call transferred to a number with a prefix which is prohibited by the administrator. First 3 letters: CP, ATI, etc., is an event category mnemonic. CP means Call Process application, etc.

2 TUI Pswd failure: hacker alert: entrance to (TUI) administrator was denied, due to the maximum number of unsuccessful passwords being entered for a specific user, and as a result the call was disconnected.

How to set the reports properties

1 Click the Reports tab. See Figure 24.

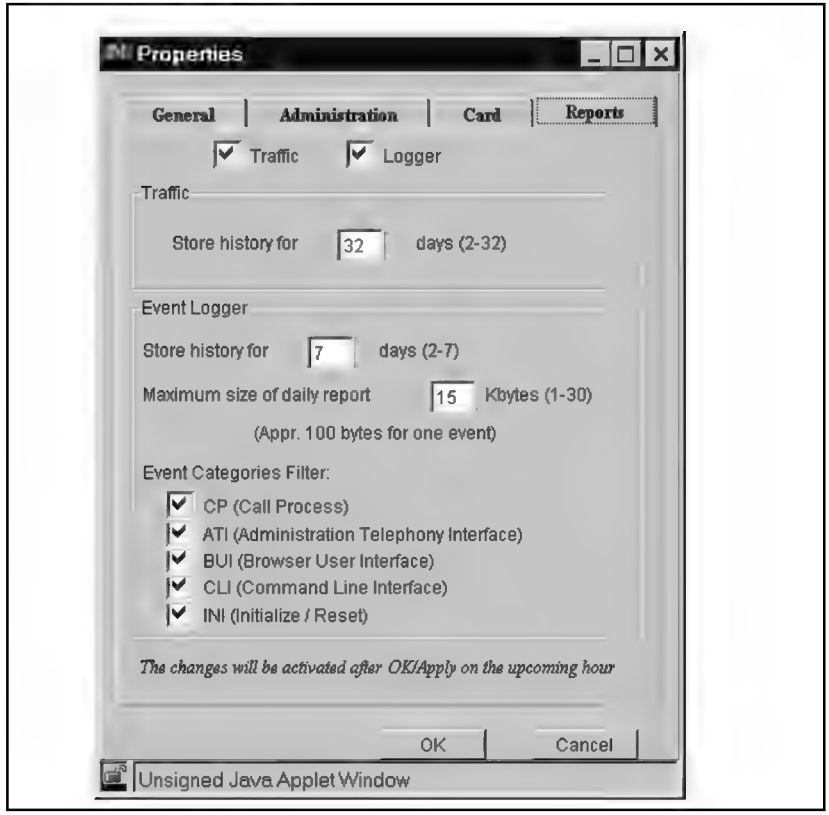
2 If required, deactivate the settings for **Traffic** and **Logger** reports.

3 If required, change Event Logger parameters.

- **Store history for** - indicates how long report/log file should be kept on MICA.
- **Maximum size of daily report** - sets the size of each day's report. You view reports in the Reports window.
- **Event Categories Filter** - click in the dialog box of any event category to determine which events to include in the reports.

4 Press OK to save your changes and close the **Properties** window.

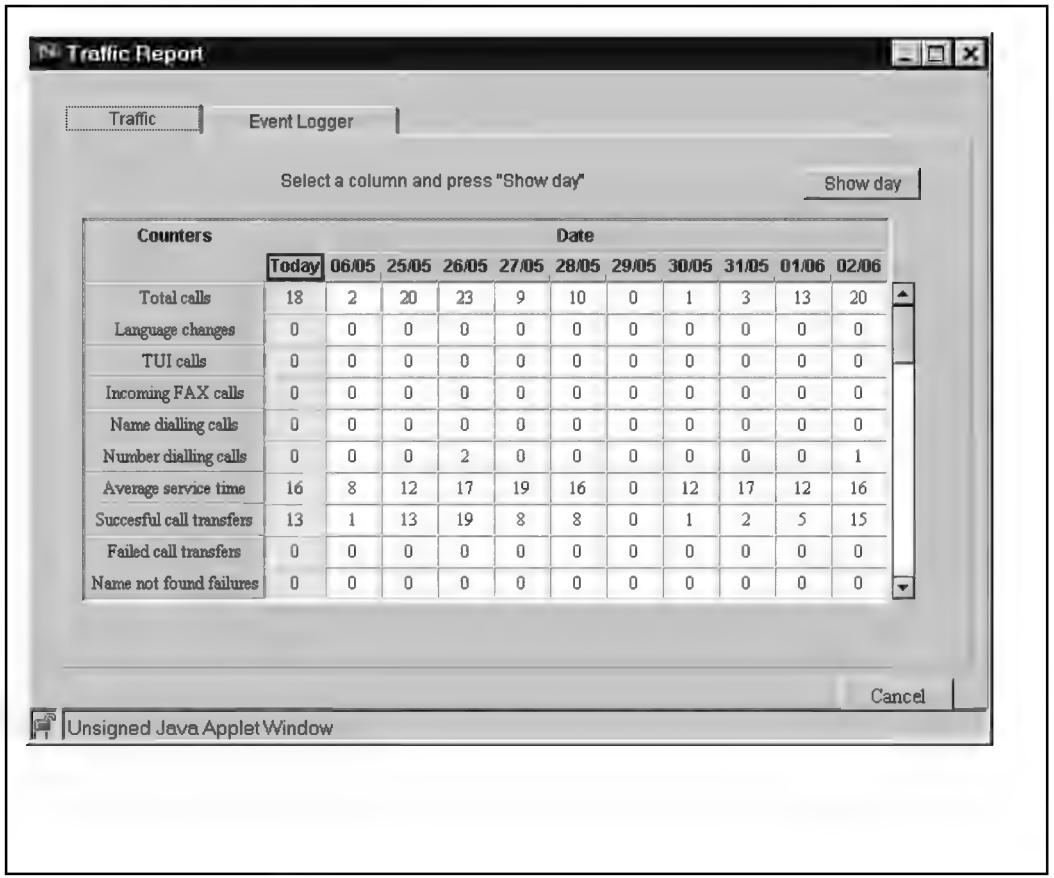
Figure 24
Properties Reports tab



View Reports

1. From the main window, click the **Reports** button. MICA displays the daily traffic report. The column labeled **Today** is selected by default (see Figure 25).
2. If you want to view a report for another day, click on the column with that date. For example, click on 27/05 to see the May 27 report.
3. Click the **Show day** button. The default storage setting is 32 days for the hard disk configuration and seven days for the Flash configuration.

Figure 25
Traffic Reports window

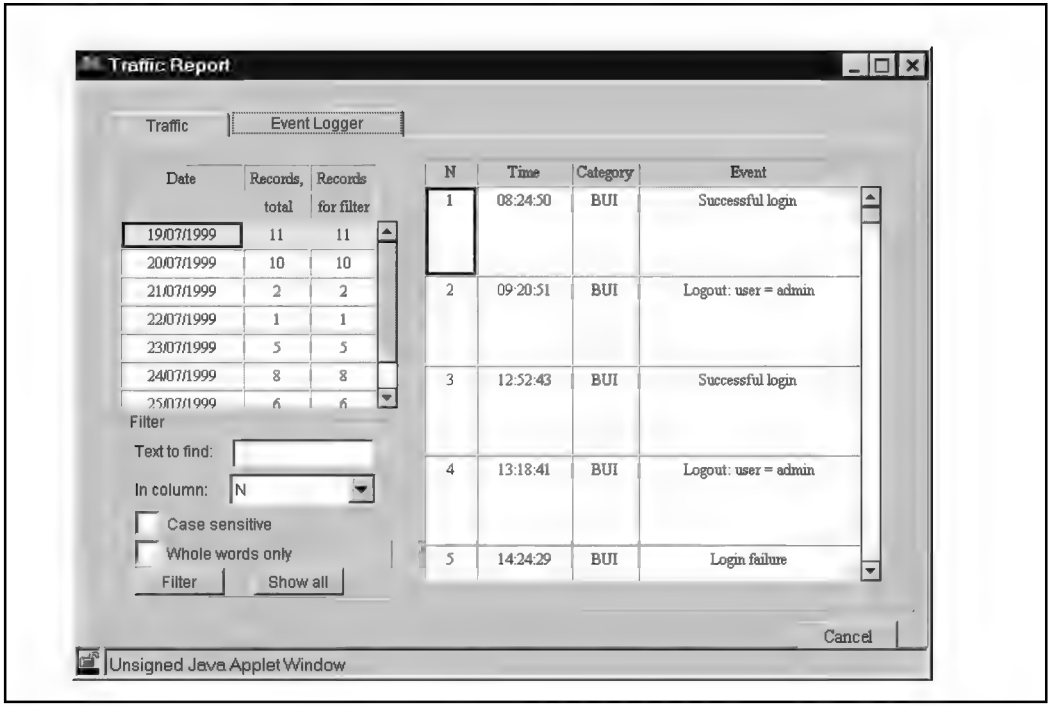


Counters	Date										
	Today	06/05	25/05	26/05	27/05	28/05	29/05	30/05	31/05	01/06	02/06
Total calls	18	2	20	23	9	10	0	1	3	13	20
Language changes	0	0	0	0	0	0	0	0	0	0	0
TUI calls	0	0	0	0	0	0	0	0	0	0	0
Incoming FAX calls	0	0	0	0	0	0	0	0	0	0	0
Name dialling calls	0	0	0	0	0	0	0	0	0	0	0
Number dialling calls	0	0	0	2	0	0	0	0	0	0	1
Average service time	16	8	12	17	19	16	0	12	17	12	16
Succesful call transfers	13	1	13	19	8	8	0	1	2	5	15
Failed call transfers	0	0	0	0	0	0	0	0	0	0	0
Name not found failures	0	0	0	0	0	0	0	0	0	0	0

View Event Logger report

1. Click the **Event Logger** tab.
2. Use the scroll bar to highlight a particular date.
3. Press Cancel to exit the **Traffic** tab.

Figure 26
Event Logger window



How to use the Event Logger Filter tool

You use the Filter tool to view only the records that contain specific information for a particular day. For example, you could view only records that contain the word login in the Event column for July 19, 1999.

1. Select a date in the date column.
2. Enter the word or words you want to find in the **Text to find:** box.
3. Select a column name from the list box in the **In column:** field.
4. If required, click Case sensitive or Whole words only.
5. Press the **Filter** button.
6. MICA displays only the records containing the word or words you specified. The **Records total** and **Records for filter** columns display the number of each kind of record.

How to view the Reports using FTP

You can get log and traffic files from MICA using FTP. They will not look exactly like the BUI reports.

1. ftp: <card IP address>
2. user: user
3. password: (CLI password - default is user)
4. cd oam
5. cd traffic
6. get files ending with . try
7. cd
8. cd log
9. get all files
10. software error files are in a:oam\err

Set Special Days parameters

In this procedure, you define July 30 as a new Special day for City Power. You can add up to three Special Days. **Holidays** is a default entry and cannot be deleted. Default Holiday dates can be changed. MICA lets you define Special Days parameters up to two years in advance.

You can have up to four types or groups of Special Days. You can include up to 150 days a year in the Special Days groups.

1 From the Main Window, press the **Special Days** button (see Figure 27 for the default Special Days window).

2 Click **New**. Create a new Special Day called Board Meeting and press OK.

3 Define the Special Day as July 28, 1999.

4 Press **Apply.**

Note: If you fill in the first five rows of the Definitions table press **Add Entry** to add a new row.

5 Click **Weekdays.** If required, modify the default Monday through Friday weekday definitions (see Figure 28).

Figure 27
Special Days window

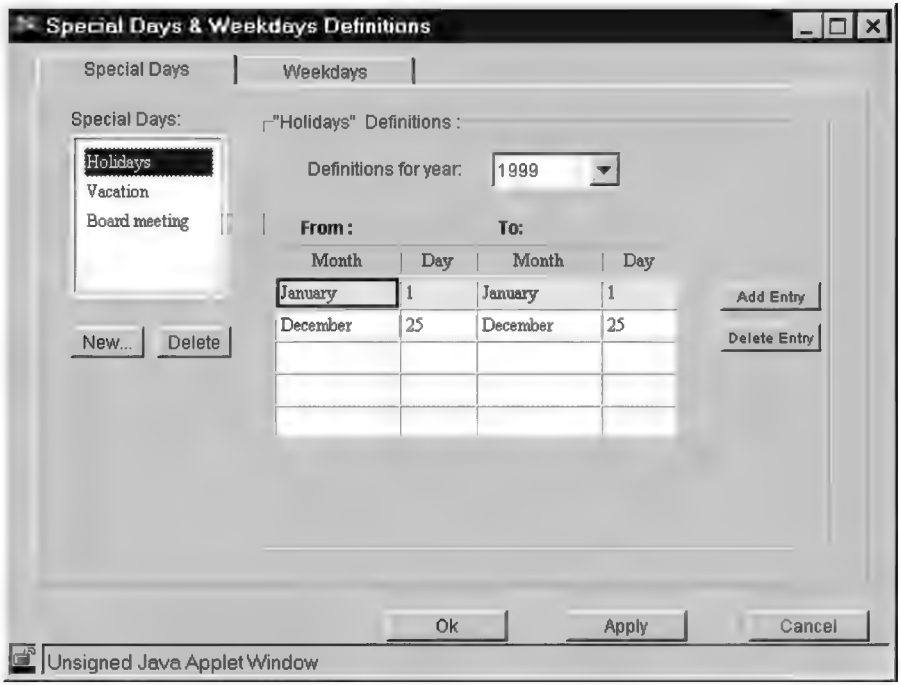
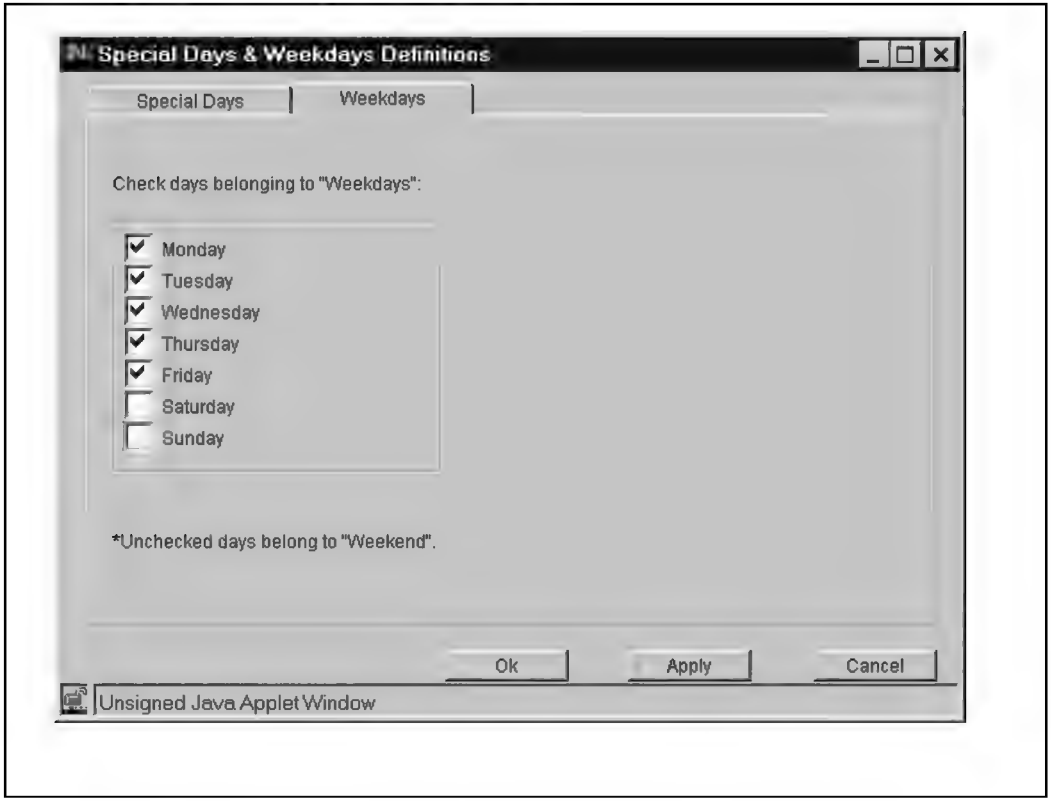


Figure 28
Special Days & Weekdays Definitions window



Configure a MICA service

These procedures explain how to configure a service and assign a treatment to the service. You program different services for different requirements reached by a different dialed number. In each service, you define treatments that are activated depending on time and caller number. A treatment contains instructions that define how MICA treats incoming calls.

Note: The MICA BUI contains a Default service which you cannot change.

Service Configuration procedure summary

1 Configure a Voice Menu.

2 Define Call Screening tables.

3 Create a Service and assign treatments:

- **a** Define caller groups
- **b** Define treatments
- **c** Define a schedule for the treatment

4 Activate a service and assign a DN.

Service configuration parameters

Call transfer is subject to Meridian 1 limitations. For incoming calls on non-supervised trunks, Meridian 1 allows transfer completion only after the called party has answered. In this case the MICA will continue retry the transfer for up to 15 seconds. During this time, the caller is on hold and will receive the hold treatment defined in Meridian 1.

In the hard drive configuration, you may define up to 32 different service profiles (assigned to service DNs), which lead to 32 different menus and 32 different call screening tables, based on 16 different time types and 16 different CLID types, to a maximum of 26 CLID digits.

In the Flash configuration, you may define up to eight different service profiles (assigned to service DNs), which lead to 16 different menus and eight different call screening tables, based on 16 different time types and 16 different CLID types, up to a maximum of 26 CLID digits.

About MICA preconfigured services

In the hard drive configuration, MICA includes five predefined services, four on the Flash card. The hard disk configuration supports up to 32 services. The Flash configuration supports up to eight services. The predefined services use predefined menus: 22 on the disk and 14 on the Flash card. The hard disk supports up to 32 menus and the Flash supports to 16 menus.

You can keep the preconfigured services, modify them, ignore them or delete them. To delete a preconfigured service, highlight the service in the Main window **Services** list, and press the Delete button. Then delete related menus. For more information, see "MICA predefined service description" on page 129.

How to configure a service

1. Login to MICA. If you need help logging in, see "How to login to the Browser User Interface (BUI)" on page 77.
2. The MICA Main Window appears. Figure 29 shows the Main window and identifies the Main window components. Table 9 describes the components.
3. Click the **Voice Menus** button.

Figure 29
MICA main window components

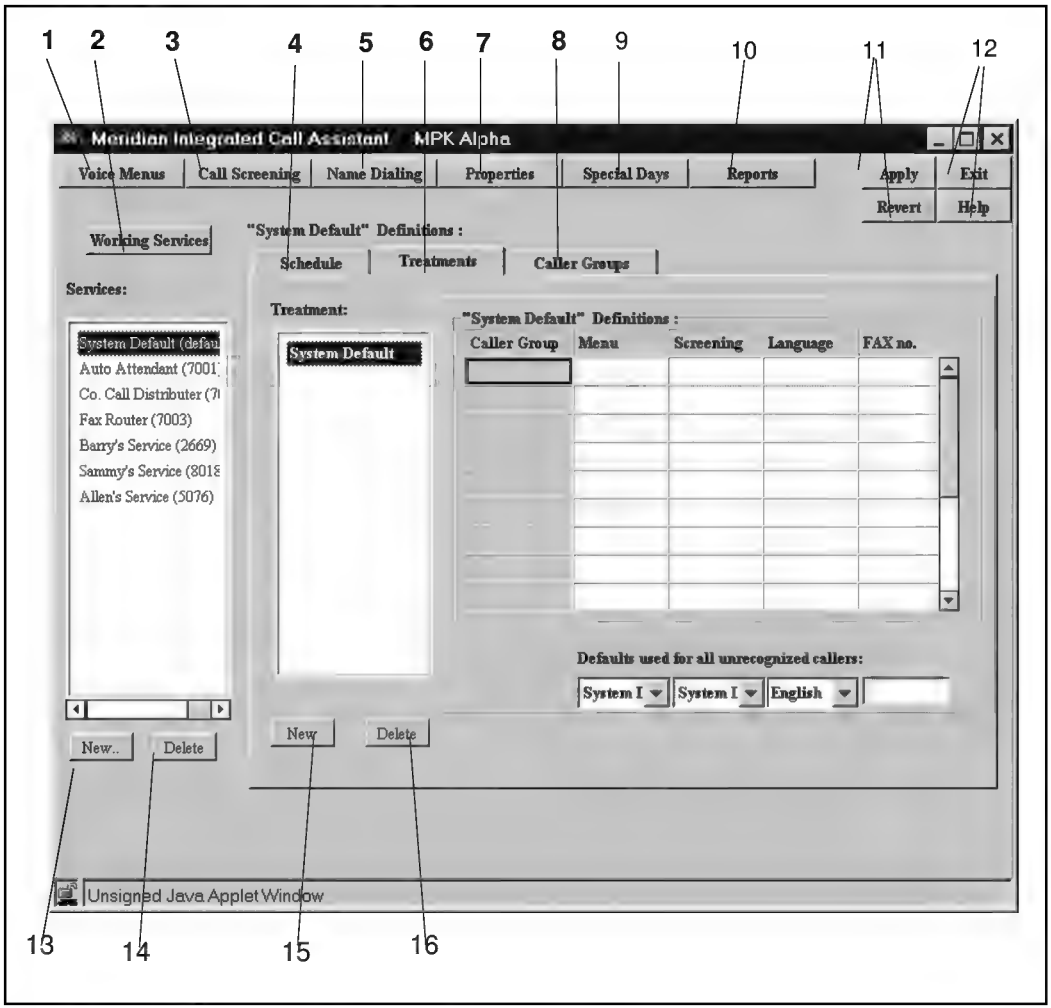


Table 9
Main Window component description (Part 1 of 2)

Number	Name	Description
1	Voice Menu button	Opens voice menu. Add or delete Voice menus; assign actions to digit keys; choose the greeting and the action following the greeting.
2	Working Services button	Opens the Working Services window. Activate available services so that they can be used by MICA callers. A Service is activated by entering a Directory Number (DN) in the Service DN list. DNs may be up to seven digits long.
3	Call Screening button	Opens the Call Screening window. Select screening standards to 'block' or allow call processing to those call destinations whose prefixes (or DNs) are included in the set of screening standards.
4	Schedule tab	Shows the treatments the caller will receive at each time period (days/hours).
5	Name Dialing button	Opens the Name dialing window, where you can edit the Name Dialing database, or activate import of a customer database. This database holds the names, phone numbers, and personal recording authorization records for all callers serviced by Meridian 1.
6	Treatments tab	Sets the desired Voice Menu, Language, determine the Call Screening and define a FAX number for a particular Caller Group.
7	Properties button	The Properties window presents four sub menus accessed by clicking on the tab headings. The four tab headings are: General, Administration, Card and Reports.
8	Caller Groups tab	Presents a list of the Caller Groups on the left of the Tab window. New Caller Groups may be added through a New Item Dialog Box accessed by clicking the 'New...' button.

Table 9
Main Window component description (Part 2 of 2)

Number	Name	Description
9	Special Days button	Define days on the yearly calendar as Special Days (holidays/ vacation periods) and list those days regarded as weekdays and those treated as part of the weekend. see "Set Special Days parameters" on page 93.
10	Reports button	View the Traffic reports and Event logs, stored on the card in separate files for each day. Traffic reporting consists of the system counting the number of times an event occurred, and printing the counters to a file every hour. Event Logging means the system writes a report about specific events to a file, at the time they occur. see "View Reports" on page 90.
11	Apply, Revert buttons	Press the Apply button to save configuration changes. Press the Revert button to revert to the last-saved changes. Revert does not undo any saved changes.
12	Exit, Help	Press the Exit button to end the MICA configuration session. This does not log you out of your Web Browser. Press the Help button to open the on-line help file.
13	New button	Click to create a new MICA service.
14	Delete button	Click to delete a MICA service.
15	New button	Click to create a new treatment
16	Delete button	Click to delete a treatment.

Configure a Voice Menu

Follow the steps in this section to set the Voice Menu parameters for City Power. The steps begin on page 107. Figure 30 shows the **Voice Menus** window and identifies the components. Table 10 describes the components.

Figure 30
Voice Menus window component description

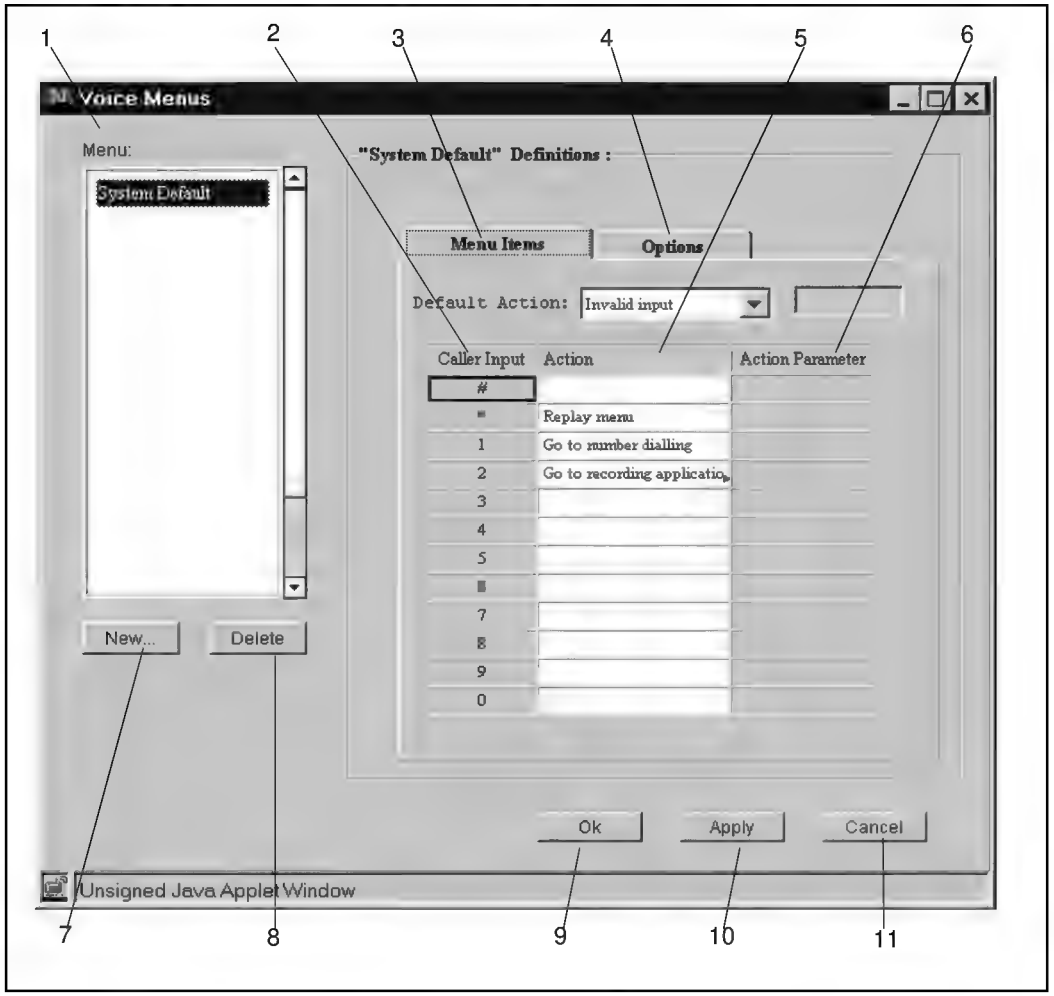


Table 10
Voice Menus window component description (Part 1 of 2)

Number	Name	Description
1	Menu	Displays all the voice menus configured on the MICA card. Displays preconfigured menus.
2	Caller input	This column lists all 12 telephone keypad keys.
3	Menu items	Click this tab to set the MICA actions to customer keypad input.
4	Options	Click to display the Options tab, where you modify the default greeting and menu settings and change other MICA parameters, if required.
5	Action	This box turns into a drop-down menu when you click in it. It displays the actions MICA can take in response to customer keypad input. ***Note:*** Table 11, "MICA Voice Menu Action settings," on page 105 describes the actions.
6	Action Parameter	If you select an Action that requires a definition, this box turns white so you can enter digits, or turns into a drop-down box that displays a list of choices.
7	New	Press this button to define a new voice menu. You can have up to 16 menus on a Flash and up to 32 menus on the PCMCIA disk.
8	Delete	Press this button to delete a highlighted voice menu. You cannot delete a voice menu while they are used in services or other menus. If you delete a service, you do not automatically delete its associated voice menu.

Table 10
Voice Menus window component description (Part 2 of 2)

Number	Name	Description
9	OK	Press this button to save changes, update the MICA database and close the Voice menus window.
10	Apply	Press this button to save changes and update the MICA database.
11	Cancel	Press this button to return to the Main Window without saving any changes.

When you configure a new voice menu, part of your tasks involve programming MICA to perform specific actions. For example, you can program MICA to transfer a call to voice mail if a caller presses 2 on a keypad. Table 11 describes the 13 available MICA actions.

If you want to configure one menu that leads to another menu, use the **Go to Menu** Action.

Table 11
MICA Voice Menu Action settings (Part 1 of 2)

Action Name	Description
Go to number dialing	Customer is prompted to enter the extension number of the party they want to reach. Caller can begin the number dialing process while prompt is playing.
Go to name dialing	Customer is prompted to begin name dialing. MICA plays a pre-recorded prompt.
Immediate number dialing	Allows customers to bypass the pre-recorded prompt and immediately enter the extension number. For example: If all extensions begin with a 3 or 2, it would be appropriate to define immediate number dialing on caller input of 2 and 3, then the caller hears the prompt "If you know the extension, dial it now." You must record this prompt or menu - it is not included in the system prompts or menus. If the caller dials 2345, the 2 activates the immediate dialing, and the DN dialed by MICA to transfer the call is 2345. In such a setup, the action "Immediate number dialing" should not be assigned to caller input 4. Caller can begin the name dialing process while prompt plays. MICA checks the number of digits entered against the length of the dialed number settings you defined in the General Properties window.
Immediate name dialing	Allows customers to bypass the pre-recorded prompt and immediately enter the name of the person being called. See the example in Immediate number dialing.
Transfer to operator	MICA automatically dials the digits you define for operator in the **Properties** window.
Transfer to voice mail	MICA automatically dials the digits you define for voice mail in the **Properties** window.

Table 11
MICA Voice Menu Action settings (Part 2 of 2)

Action Name	Description
Disconnect	MICA disconnects the call.
Replay menu	MICA replays the menu from the beginning.
Go to recording application	MICA sends callers to the Telephone User Interface (TUI). The TUI has an administrator level and a user level. Users can login to the TUI and record names, if allowable under the MICA configuration. Administrators record greetings and menus and activate or deactivate emergency menu.
Go to menu	The Action Parameter box changes to a drop-down menu that displays a list of available menus. When a menu is selected, MICA switches to that menu and functions according to all the menu definitions. Use this action to create a menu tree, where a top menu leads to a submenu.
Transfer to number	The Action Parameter box turns white and you enter the number MICA uses to transfer calls.
Select language	The Action Parameter box changes to a drop-down menu, where you can change the language MICA plays for callers.
Invalid input	Caller hears a prompt telling them they have entered an invalid input.

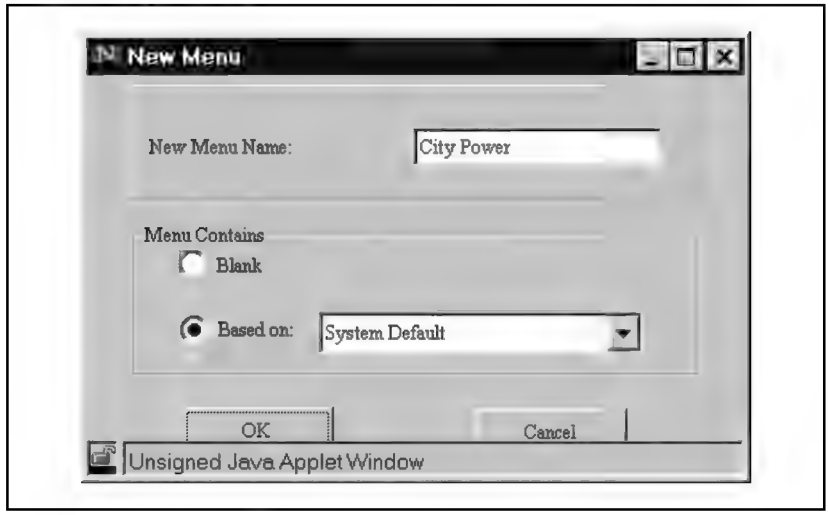
Create a new voice menu

If your MICA application includes DNIS and/or CLID, create two new voice menus and configure each one according to the steps in this section.

1 From the **Main Window**, press the **Voice Menus** button. The **Voice Menus** window appears. Press the **New** button (see Figure 30).

2 Create a new menu named City Power that is based on System Default settings, as shown in Figure 31. Press **OK** to accept the new menu and return to the **Voice Menus** window **Menu Items** tab.

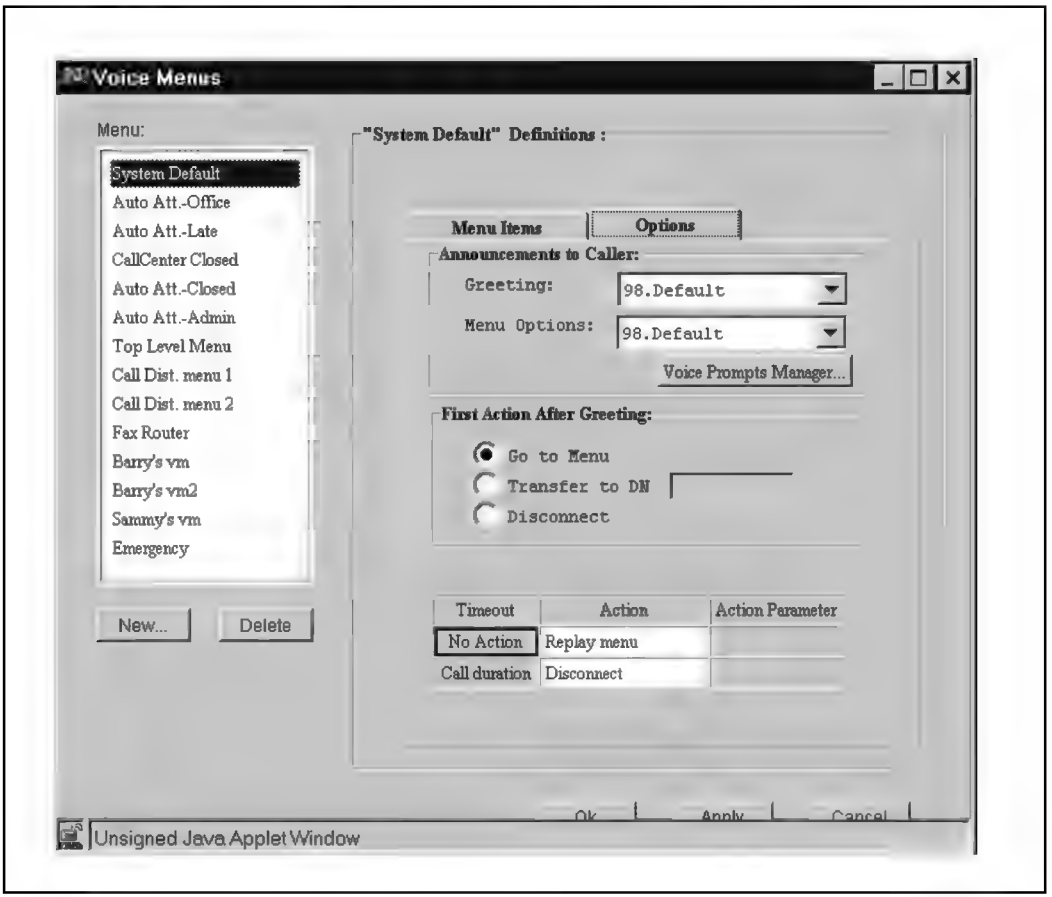
Figure 31
New Menu window



Configure the Voice Menu Options

In this section, you program new entries for the **Announcements to Caller Greeting** and **Menu Options**. You select the **First Action After Greeting** MICA takes when answering calls for City Power. You set the actions MICA performs if the City Power caller exceeds the **timeout** settings for **no action** or **call duration**. Figure 32 shows the **Voice Menus Options** window.

Figure 32
Voice Menus Options window



1 From the **Voice Menus** window **Menu Items** tab, highlight City Power in the **Menu** list. Press the **Options** tab to display the **Options** window.

2 Press the **Voice Prompts Manager** button. This opens the **Voice Prompts Manager** window **Greeting prompts** tab.

3 In this step, you create a Greeting Prompt for City Power named **30 City Power**. Place your cursor in the ID number column and type in 30. MICA accepts any number between 1 and 32 if you have a hard disk, or between 1 and 16 if you have a Flash card. Press the Tab key to move to the Name column and type in City Power as the name for the greeting prompt.

When you record the greeting that MICA plays for City Power callers, you use the Greeting prompt ID number as a reference. You record the greeting through the MICA Telephone User Interface (TUI).

4 In this step, you create a Greeting Prompt for City Power named **30 City Power menu**. Press the **Menu prompts** tab. Define an ID number for the MICA menu prompt. Place your cursor in the ID number column and type in a number between 1 and 32 if you have a hard disk, or between 1 and 16 if you have a Flash card. Press the Tab key to move to the Name column and type in a name for the menu prompt. Create a Menu named 30.City Power menu.

When you record the menu prompts that MICA plays for City Power callers, you use the Menu prompt ID number as a reference. You record the menu through the MICA Telephone User Interface (TUI).

5 Press OK to return to the **Voice Menus Options** window.

Change Announcements to Caller default settings

In this procedure, you replace the default settings for **Greeting** and **Menu Options** in the **Announcements to Caller** box.

1 In the **Greeting** field, click the down arrow to display the drop-down menu. Click the Greeting prompt ID you created for City Power.

2 In the **Menu Options** field, click the down arrow to display the drop-down menu. Click on the Menu prompt ID you created for City Power.

3 Press the **Apply** button at the bottom of the **Voice Menu Options** window to save the **Announcements to Caller** changes.

Change First Action After Greeting default setting (optional)

This field defines what action MICA takes after playing the greeting. **Go to Menu** is the default setting for MICA's first action after greeting. For the City Power example, leave the default setting so MICA plays the **30. City Power Menu1**. If your application requires a different parameter, perform steps 1 or 2 and 3.

> *Note:* In an ACD front-end application, selecting **Transfer to DN** forwards calls to the predefined destination after playing the prompt without waiting for caller input.

1 If you choose any action other than **Go to Menu**, only the greeting plays. The menu options voice menu does not play.

2 If you click the Transfer to DN radio button, the gray box turns white and you enter the DN MICA uses to transfer the calls.

3 If you click Disconnect, MICA disconnects the call after playing the greeting.

4 Press the **Apply** button to save the changes.

Change No Action and Call Duration default settings (optional)

These settings define what MICA does if a caller exceeds the timeout settings for no action or exceeds the call duration parameter. The default setting for **No Action** is Replay Menu. The default setting for **Call Duration** is Disconnect. For the City Power example, do not change the default settings. If your application requires a different parameter, perform steps 1 or 2 and 3.

1 If you want to change the default action for MICA after a caller exceeds the timeout for No Action, click in the **Action** box. The **Action** box changes to a drop-down menu. Select an action from the menu. Table 11 describes each action.

2 If you want to change the default action for MICA after a caller exceeds the timeout for **Call duration**, click in the **Action** box. The **Action** box changes to a drop-down menu. Select an action from the menu. Table 11 on page 105 describes each action.

3 Press the **Apply** button to save the changes.

Define Menu Items

In the previous step, you created a new **Menu Prompt** named 30.City Power Menu1 and selected it in the **Menu Options** field in the **Announcements to caller.**

In this step, you define the action MICA takes when it plays 30.CityPower Menu 1 and a caller presses a keypad key. If required, set up one action for each keypad key. See Table 11 on page 105 for a description of the possible actions. MICA uses the default action when callers press a key not defined in the table.

1 From the **Options** tab, press the **Menu Items** tab. If required, select City Power from the **Menu** list.

Note: Because you based the City Power voice menu on the default setting, the **Menu Items** tab displays the MICA default settings.

2 Place the cursor in the **Action** box next to the **1** in the **Caller Input** column. The **Action** box changes to a drop-down menu. Select an action from the menu. Table 11 describes each action.

Editing the emergency menu

MICA ships with a default emergency menu that offers number dialing and a recording application. The emergency menu options are slightly different than the normal menu options:

- Announcement files have fixed name and number. You only specify whether to provide announcements or not. You must specify at least one announcement.
- You must specify a screening table, since the emergency menu stands alone and is not in context of a specific service.
- The language is preset to use the system default language, which is the first language in language set.
- One of the menu items should be the recording procedure, since you use the recording procedure used to deactivate the emergency menu through the TUI.

To edit the emergency menu, carry out the following steps:

1 Select the emergency menu from the list of menus in the Voice Menus window (see Figure 33).

2 Set menu items as in a regular menu.

3 Define greetings and menus in the options tab (see Figure 34).

4 Select a screening table to use when you activate the emergency menu.

Figure 33
Emergency menu Menu Items tab

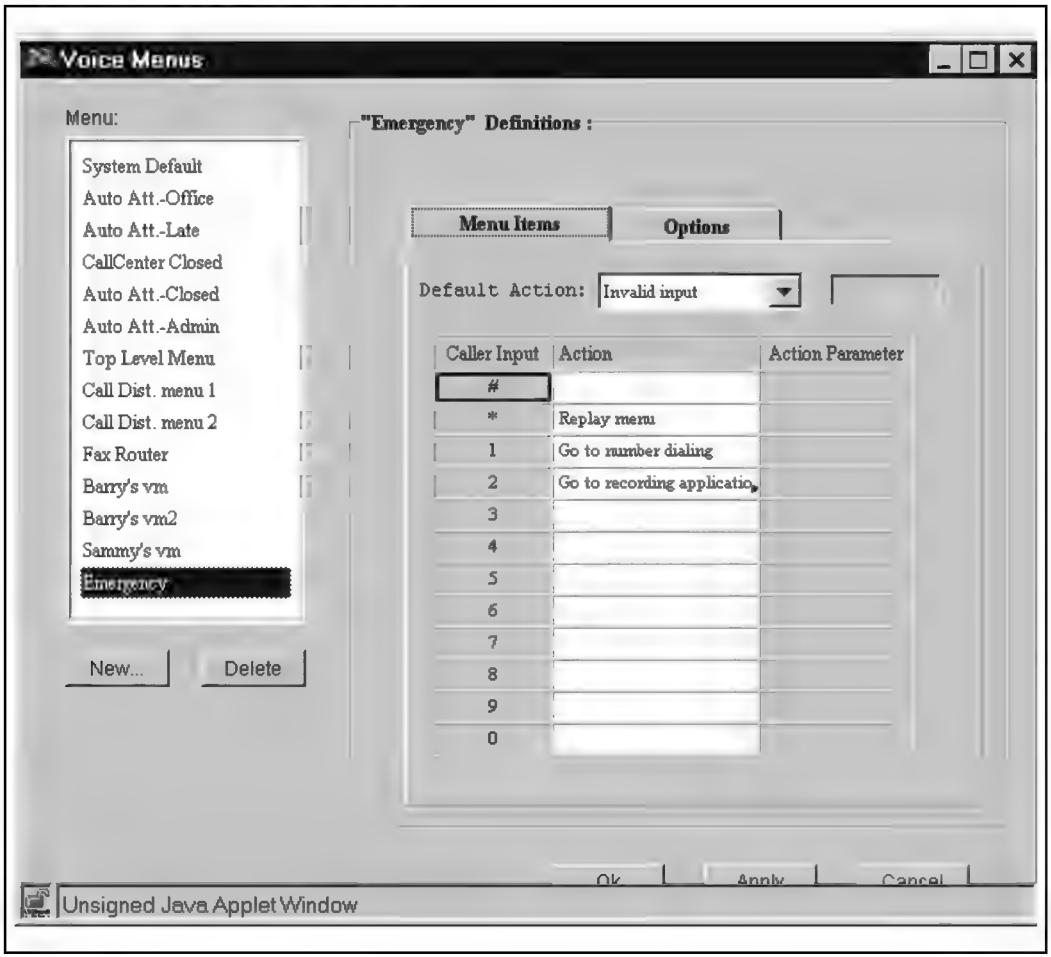
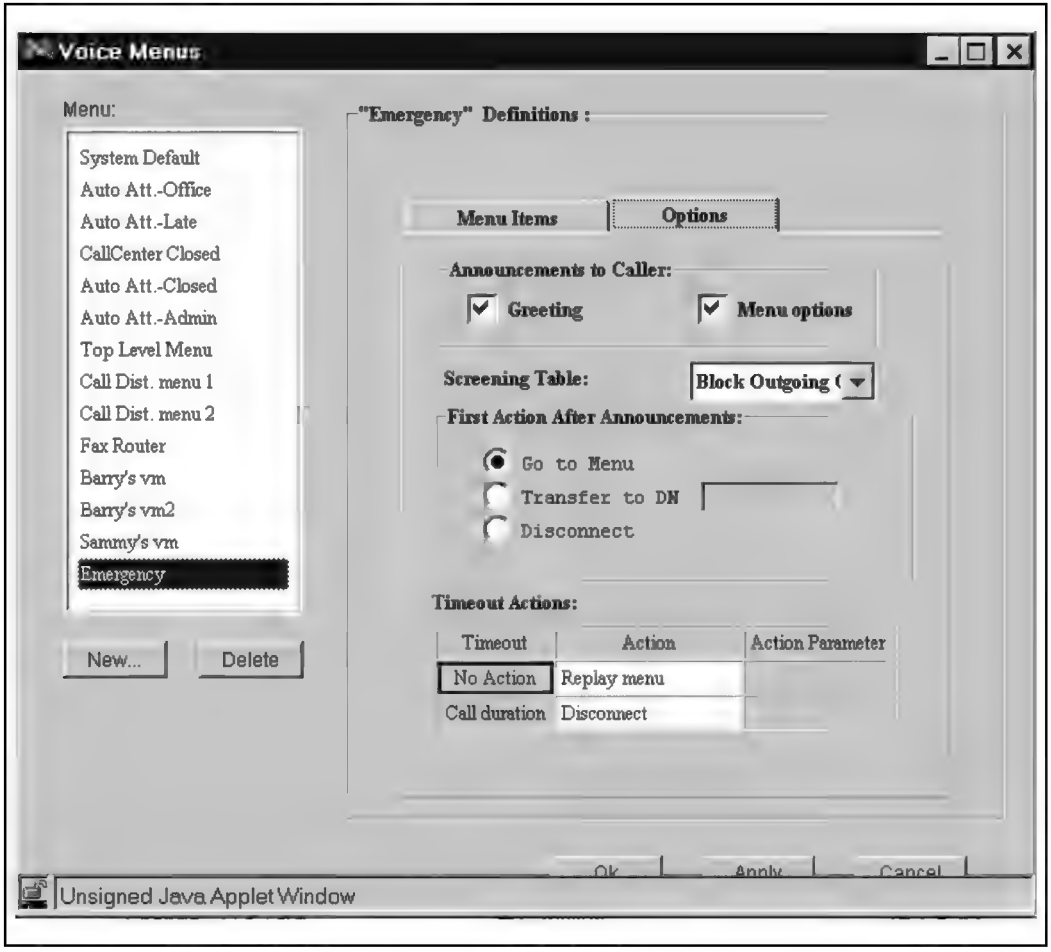


Figure 34
Emergency menu default Options tab



Define Call Screening

You define call screening parameters to block MICA from dialing certain destinations after customers enter the number they want to be transferred to. For example:

MICA answers a call. The caller presses 2 after hearing the MICA prompt "If you know the number you want to reach, press 2".

Then MICA prompts: "Please enter the number you wish to be transferred to, followed by the pound sign". The customer enters 6011526725551212#.

MICA compares the dialing prefixes to the privileges you define in the call screening table. If you allow MICA to transfer calls to numbers that begin with 6011 (which is an international dialing code in some countries), MICA dials the digits and transfers the call. If you do not allow MICA to transfer calls to destinations that begin with 6011, the caller is notified that the transfer is denied.

MICA only screens calls after the caller enters the digits and presses the # key. An entry can be the prefix of another entry. When MICA checks the dialed number, call processing software selects the longest match. For example, you can deny the dialing prefix 6, but allow the prefix 69, because MICA looks for the longest match.

Note: The default setting is that all calls are Allowed.

1 From the Main Window, press the **Call Screening** button. Figure 35 shows the **Call Screening** table default settings.

2 Click **New**. Create a new Screening Table named **City Power** based on the default settings. Press OK to return to the Call Screening Window. In the hard disk configuration, you may have up to 32 call screening tables. The Flash card can contain up to eight call screening tables.

3 In the Dialed Prefix list, enter outgoing call prefixes. The Dialed Prefix list can hold up to 100 entries. The maximum prefix digit length is 20 digits. See Figure 36.

4 Click in the **Authorization** box for each dialed prefix entry. The Authorization box turns into a drop-down menu that displays Allow or Deny settings. Pick one setting for each prefix in the **Dialed Prefix** column.

Figure 35
Call Screening window

5 Set the default Authorization box to Allow or Deny dialed prefixes not listed in the Dialed prefix box.

6 Press **OK** to save the changes. MICA returns you to the Main Window.

Figure 36
Call screening table for City Power

Create a Service and assign treatments

In this procedure, you create a new service, then define caller groups, call treatments and set a schedule. Each Service is made up of three elements, defined per service. These are:

- Caller Groups
- Treatments
- Schedule

Each element is a tab on the **Main Window**.

> ***Note:*** Caller groups, schedules and treatments are specific to each service. Menus and screening tables are system resources and you can use them for multiple services.

Create a new service

1 From the Main Window, press the **New** button under the **Services** list. You can have 32 services on the hard disk and eight on the Flash.

2 Create a new service based on the default settings. Press OK to return to the **Schedule** tab of the Main Window. If required, you can include the Service DN in the service name.

Create caller groups

MICA routes calls according to their origin (caller identification). If all callers receive one treatment, skip to the **Treatments** tab. If you use CLID and want certain callers to receive special treatment, create caller groups. One prefix may be a prefix of another. Call processing software looks for the longest match. For example, you create a caller group with the prefix 612 that includes all people in Minnesota. You can create another caller group that uses the prefix 612434 in Minneapolis, Minnesota.

Caller Groups description

Caller groups define incoming calls as belonging to different groups according to CLID. MICA handles calls differently for members of different caller groups.

For example, you create a group of prefixes named French. It includes prefixes 1416 and 1807. When MICA answers a call that includes these dialed prefixes, it plays a menu in French and transfers the call to a French-speaking ACD agent.

A Prefix or number can only belong to one caller group. Define up to 15 Caller Groups. Up to 100 prefixes can be defined. Each prefix and/or number may be up to 26 digits long.

A list showing all the caller numbers in all the listed caller groups (sorted by number sequence) is displayed by clicking the Show all callers button. This list is for viewing only and may not be edited.

Caller Groups configuration procedure

In this step, you create two new caller groups for the Moore Company.

1. From the **Main Window Schedule** tab, click on a service in the **Services** list and click the **Caller Groups** tab.
2. Click the **New** button at the bottom of the **Caller group** list. Create a new Caller Group named **French** based on the default setting and press OK. The word French appears in the Caller group list.
3. Click on **French** in the Caller group list. In the **Prefixes** list, enter the prefixes that you want to include in the caller group French.
4. Create other caller groups and define prefixes as required.

Define Treatments

In this procedure, you select a service and define a treatment that tells MICA how to answer and route incoming calls to that service. You can define up to 16 treatments, including default, for both Flash and hard disk configurations. You define different treatments if you plan to handle calls differently according to when MICA receives the call. Otherwise, you may overwrite the system default treatment with the desired call-handling settings and MICA will treat all calls the same, including weekends and vacations. You select the default and make your definitions in it. You just made a new service. You can change the default treatment inside a service you created.

Figure 37 shows an example of a treatment named City1, which is defined for City Power. City Power does *not* use Caller Groups because MICA treats all calls to City Power the same way. Note that the **Caller Group** box is empty. Deleting a treatment will remove it from all schedules in which it appears. The maximum length of the FAX DN is 20 digits.

Option 1 - Define a treatment for a non-caller-group service

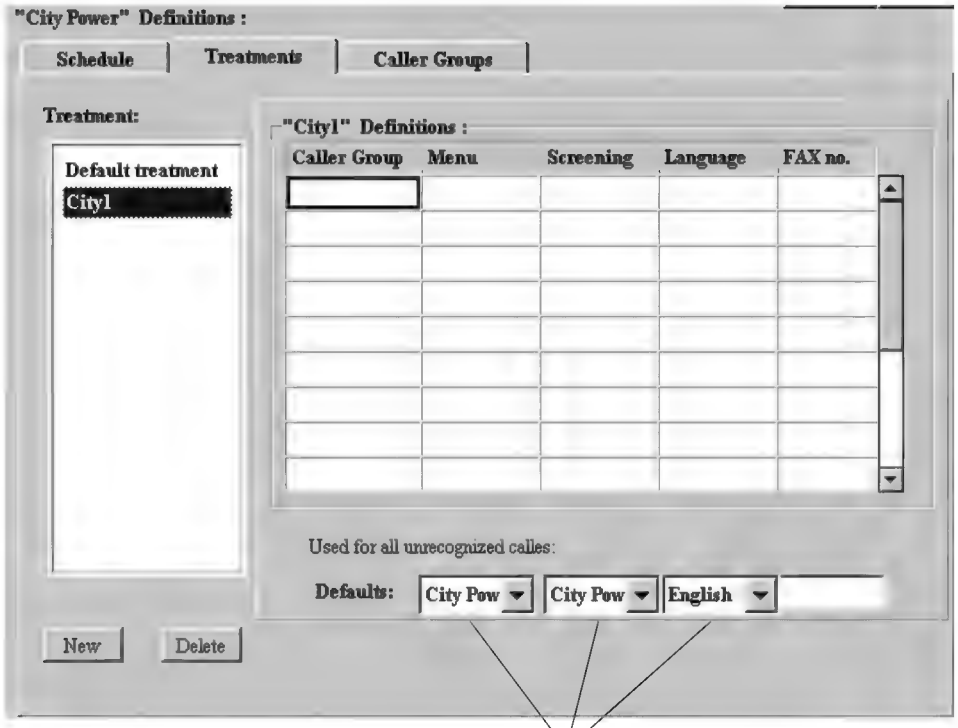
1. Click on a Service in the **Services:** box.
2. Click the **Treatments** tab.
3. Click the **New** button.
4. Create a new Treatment and press **OK**.
5. Highlight the new Treatment in the Treatments box.
6. Look at the bottom of the screen. Under the words **Use for all unrecognized calls** you see three drop-down menu lists:
   a. Click in the left drop-down menu list at the bottom of the **Menu** column. A list of all the Voice Menus available on MICA appears. Select **City Power**. MICA answers and routes calls according to the parameters you set up for the menu named **City Power** in the **Voice Menus** tab.
   b. Click in the middle drop-down menu at the bottom of the **Screening** column. Select **City Power**. MICA uses the call screening information you defined for City Power in the **Call Screening** tab.

c Click in the right drop-down menu at the bottom of the **Language** column. Select the appropriate language. MICA uses the language to answer calls. MICA cards in the FLASH configuration support only English.

7 If you want MICA to use the FAX extension entered in the Properties/ General tab, leave the box at the bottom of the **FAX no.** column empty. If you want MICA to use another FAX number for this treatment, type another FAX number in the box.

8 Press Apply to save your changes.

Figure 37
Treatments window (no caller group defined)



Option 2 - Define treatment for a service that uses a caller group

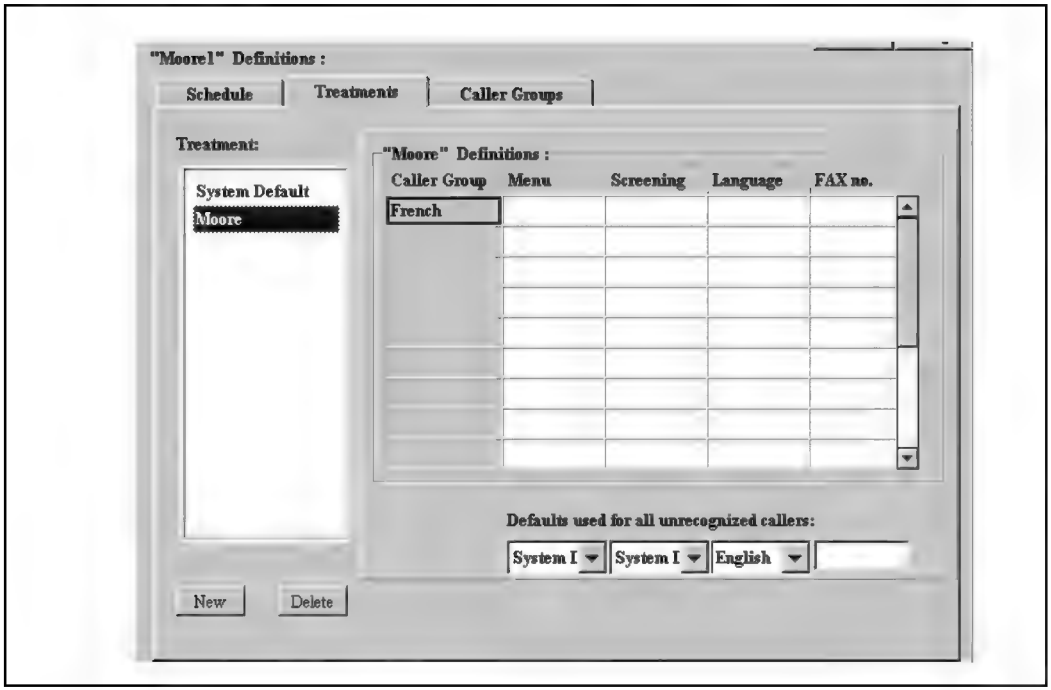
In this procedure, you define one treatment providing different call-handling for callers from different caller groups.

Stage 1: Set the call-handling parameters for callers in the caller group named French.

Stage 2: Set the call-handling parameters for all other callers.

Figure 38 shows an example of a treatment named Moore, which uses a caller group for the Moore Vacuum Cleaner company.

Figure 38
Treatments window



Define a treatment

1 Click on a Service in the **Services:** box.

2 Click the **Treatments** tab.

3 Click the **New** button.

4 Create a new Treatment called **Moore1** and press **OK**.

Stage 1 - Define call handling for Caller Group "French"

1 Highlight **Moore1** in the Treatments box.

2 Each cell in the left column under **Caller Groups** displays one caller group that is assigned to that service. Select French, the caller group name you created in the Caller Group tab. MICA uses the parameters you set in the **French Caller Group** to route calls according to CLID.

3 Click in the box beneath **Menu**. A drop-down list appears. It shows all the voice menus available on MICA. Select **Moore**. MICA uses the voice menu parameters you created for **Moore** in the **Voice Menus** tab.

4 Click in the box beneath **Screening**. A drop-down list appears that shows all the call screening groups available on MICA. Select **Moore**. MICA uses the call screening parameters you created for **Moore** in the **Call Screening** tab.

5 Click in the box beneath **Language**. A drop-down list appears that shows all the call screening groups available on MICA. Select **French**. MICA answers all calls in French when it sees an incoming call with a prefix that matches the prefixes defined for **French** in the Caller Group tab.

6 If you want MICA to use the FAX extension entered in the Properties/ General tab, leave the **FAX no.** column empty. If you want MICA to use another FAX number for this treatment, type another FAX number in the box.

7 Press **Apply** to save your changes. It is not necessary to define menus, call screening language and FAX number on the bottom of the screen. MICA uses the definitions contained in the list boxes beneath the **Menus, Screening and Language** columns.

Stage 2 - Define call handling for "all other callers"

At this point you define how MICA treats and routes calls for all callers to the service whose dialing prefixes are not defined in the **French** caller group.

1 Look at the bottom of the screen. Under the words **Use for all unrecognized calls** you see three drop-down menu lists.

2 Click in the left drop-down menu list at the bottom of the **Menu** column. A list of all the Voice Menus available on MICA appears. Select **Moore**. MICA answers and routes calls according to the parameters you set up for the menu named **Moore** in the **Voice Menus** tab.

3 Click in the middle drop-down menu at the bottom of the **Screening** column. Select **System Default**. MICA uses default call screening information.

4 Click in the right drop-down menu at the bottom of the **Language** column. Select English. MICA uses English to answer calls whose prefixes are not part of the French caller group.

5 If you want MICA to use the FAX extension entered in the Properties/ General tab, leave the box at the bottom of the **FAX no.** column empty. If you want MICA to use another FAX number for this treatment, type another FAX number in the box.

6 Press Apply to save your changes.

Set a treatment schedule

In this section, you select a service and define which treatments MICA uses for the service according to time of day and day of week.

Figure 39 shows the following:

- MICA uses the default treatment for callers on Wednesdays between midnight (00:00 hours) and 8 am (08:00 hours).
- MICA uses the City1 treatment for callers between 8 am and 5 pm (08:00 and 17:00 hours).
- MICA uses the City2 treatment for callers between 5 pm and midnight (17:00 to 00:00 hours).
- Unspecified times and days receive the default treatment.

Note: If you want MICA to use a certain treatment for a whole day, choose this treatment from the **Default Treatment** drop-down menu.

How to set a treatment schedule

1 From the **Treatments** tab, press **Schedule.**

2 Click on a Service from the **Services** list.

3 Depending on your application, select a day from the schedule entry list, or select Weekdays or Weekends to assign treatments for those groups of days.

4 Click in the **From** box and type in the time you want MICA to start using the treatment. **Important:** Calculate the time using the 24-hour clock format, where midnight is 00:00, and use hh:mm format to enter the hours in the **From** and **To** boxes in 15-minute intervals.

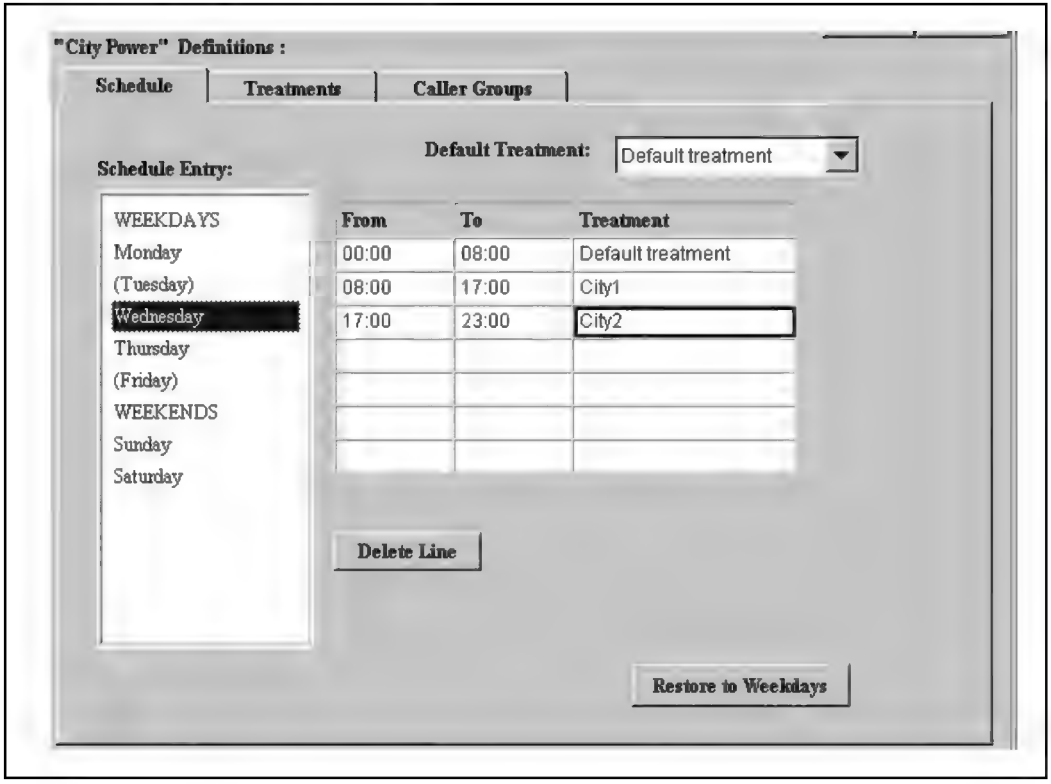
5 Click in the **To** box and type in the time you want MICA to stop using the treatment.

6 Click in the **Treatment** box and select a treatment for MICA to use during the time period you specified.

7 Schedule other treatments as required. MICA uses the default treatment for unspecified times.

If you want MICA to give a whole day the same treatment, select one treatment and do not specify any hours. If you do not specify weekend, holiday or vacation treatments, MICA uses the Default treatment.

Figure 39
Schedule for City Power treatments



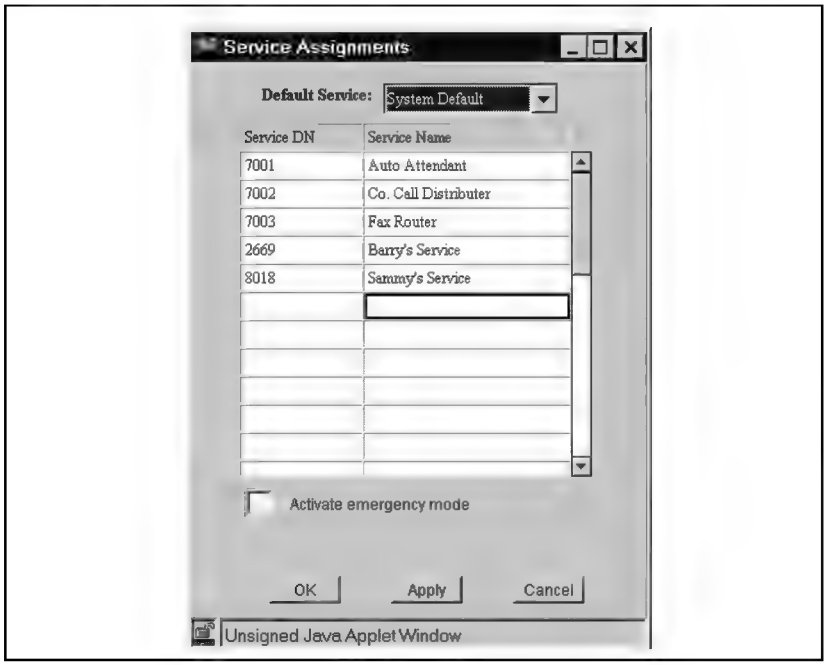
Assign a DN to a Service

In this procedure, you click on the **Working Services** button to open the **Service Assignments** window and assign a service DN to a service. Figure 40 shows an example of the Service Assignments window. In the example, when callers dial 7001, they receive the treatment and hear the menus, greetings, and other MICA components defined for the Auto Attendant service. Before you assign a service DN, read "How to define a MICA service number" on page 31.

About "Activate emergency mode"

When you check this box in the Service Assignments window, the "Emergency Menu" overrides normal operation of all services. This is intended for unexpected conditions in which the company cannot operate. For more information about Emergency mode, see "About the emergency menu" on page 173.

Figure 40
Service Assignments window



Service DN parameters

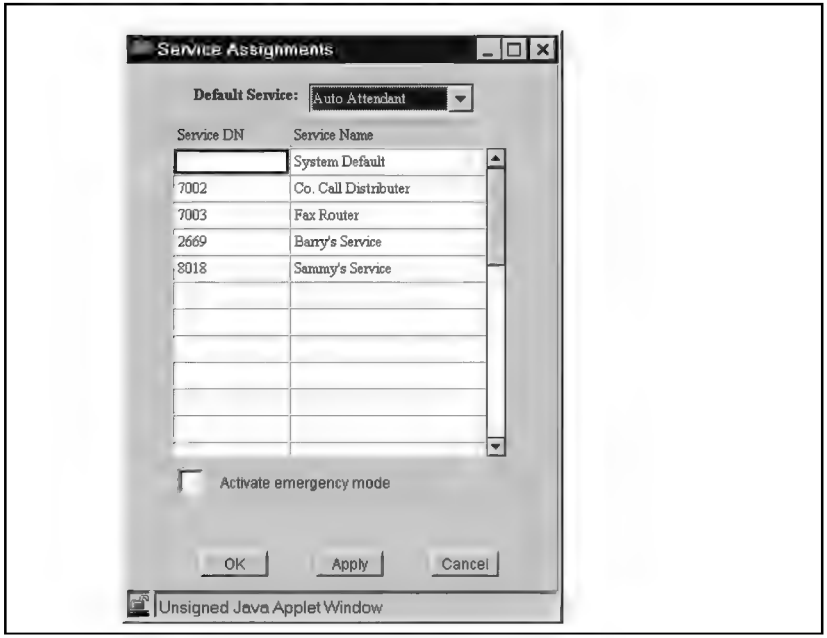
- Service numbers can only be the numbers defined on the Meridian 1 to route to the MICA card.
- You can only use numbers that will appear on the display of the MICA units, so MICA recognizes the number.
- You can only assign one DN to each service.
- Do not define DN 9999999. The system uses this number to mark services with no DN defined.
- You can enter up to seven digits in the **Service DN** list.
- MICA sorts the Service DNs according to DN, not according to Service Name. To remove a service from the **Working Service** window. Deleting the DN deactivates the Service.
- To store services in the Service Assignments list for future use, list them and delete their DNs.
- To edit the Service names, click in the Service Names list.Default service explanation

When you click the Default Service combo box, MICA lists all services that have an assigned DN. You can select any service as the Default Service. You cannot delete a service used as a Default Service. When you select a service with an assigned DN as the default service (7001 Auto-Attendant, for example), the service loses its DN (see Figure 41). MICA uses the Default service to handle incoming calls where the dialed number is not a recognized service DNs. This can occur in two ways:

1 Calls are routed to MICA using numbers that do not appear in the service assignment table. An example would be an application using DNIS. All calls to the DID route terminate on the MICA. DNIS digits are used as the service number.

2 The dialed number appears in the service assignment table, but does not appear on the MICA set display. An example of this is when a caller dials the MICA ACD queue DN that does not reach the set display.

Figure 41
Auto Attendant defined as the Default Service



Working service assignment procedures

1. From the Main Window schedule tab, click on a service in the **Services** list.
2. Press the **Working Services** button. This opens the **Service Assignments** window.
3. In the **Service DN** column, enter a DN up to seven digits.
4. Press the **Apply** button.

MICA predefined service description

This section describes the MICA preconfigured services. You can modify the services to fit your application. The preconfigured services use the customer dialing plan listed in Table 12. The Flash configuration contains four predefined services. The hard disk configuration contains five predefined services.

Table 12
Predefined service customer dialing plan (Part 1 of 2)

Characteristic	Description
Operator	0
Express messaging service	5000.
GateHouse	5500.
Local DNs	2, 3, 4, 5XXX
Network access	6XXX
DID access	7, 8XXX
Main company Fax	8000.
Dept. Fax machines	800X.
PSTN access	9
Administrator DNs (internal)	5001, 5002
Administrator DN (external)	222-2000

Table 12
Predefined service customer dialing plan (Part 2 of 2)

Characteristic	Description
Company Voice Mail Box	5005.
Call Center salespeople	1XXX.

Predefined service description

The MICA preinstalled services are named:

- Auto Attendant Service
- Company Call Distributer service (menu based service)
- Fax Routing service
- Two Call Center Front End services providing DNIS differentiation

Note: On a flash card, there is only one Call Center Front End service, and it has fewer menus.

- MICA uses one screening table for all callers to all services, including when Emergency menu is used. The call screening table is is the "block outgoing calls" table. It is initially defined as blocking calls beginning with the digit '9', but allowing calls to no. 9-408-222-3333.

In services other than the Fax Router service, Faxes are all transferred to the Main company Fax.

Auto Attendant Service description

Service Name: Auto Attendant

Reached by number: 7001

Caller groups (see Figure 42):

1 Administrators (CLID 5001, 5002, 222-2000): allowed to enter administrator interface and record greetings and menus in the TUI.

2 French speakers (CLID prefix: 514 (Montreal)): These callers hear all recordings in French.

3 All callers who do not belong to the above groups are considered North American English speakers.

Note: On Flash card, there is no multi-language support.

The Auto Attendant service treatments and schedule description

1 Office Hours: from 9 am to 5 pm Monday through Friday.

2 After Office Hours: all other hours Monday through Friday.

3 Weekend and Holiday schedule: Saturday, Sunday, January 1 and December 25.

4 On Tuesdays, Working hours are 9 am to 4 pm, so Tuesday is defined separately.

5 To return to the Weekdays definition, select Tuesday, then press "Restore to Weekdays" button.

Figure 42
Auto-attendant service caller groups

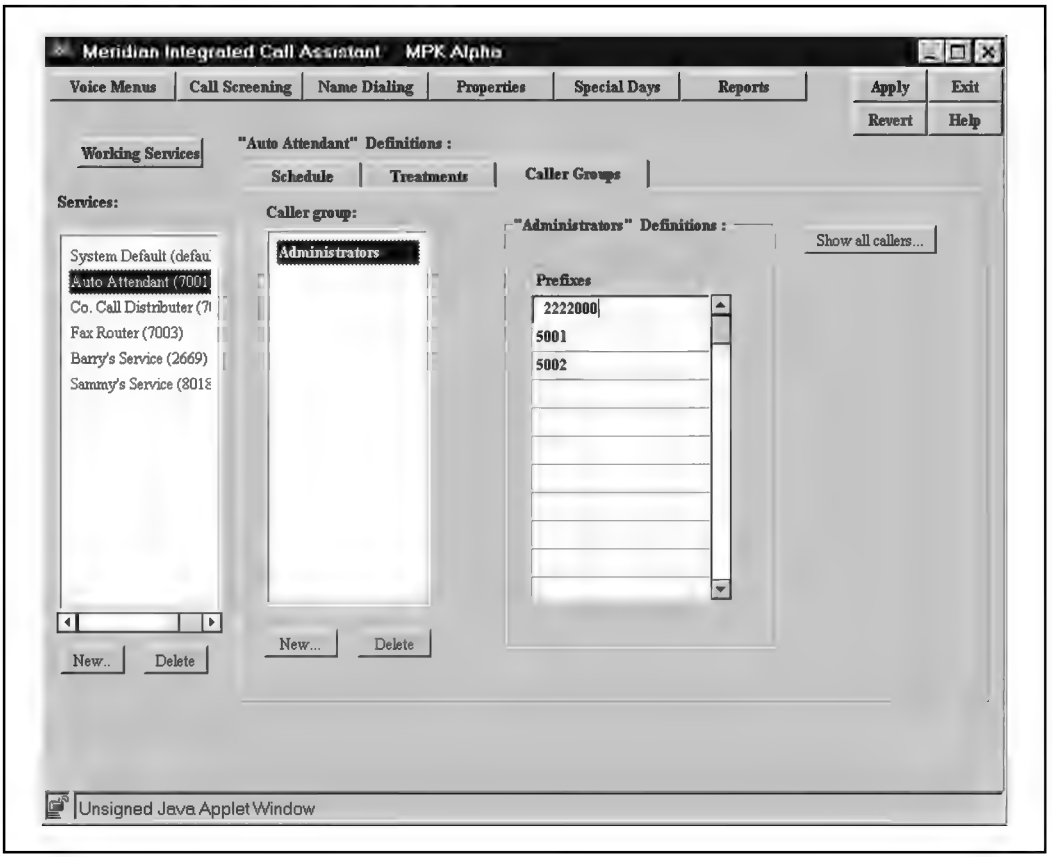
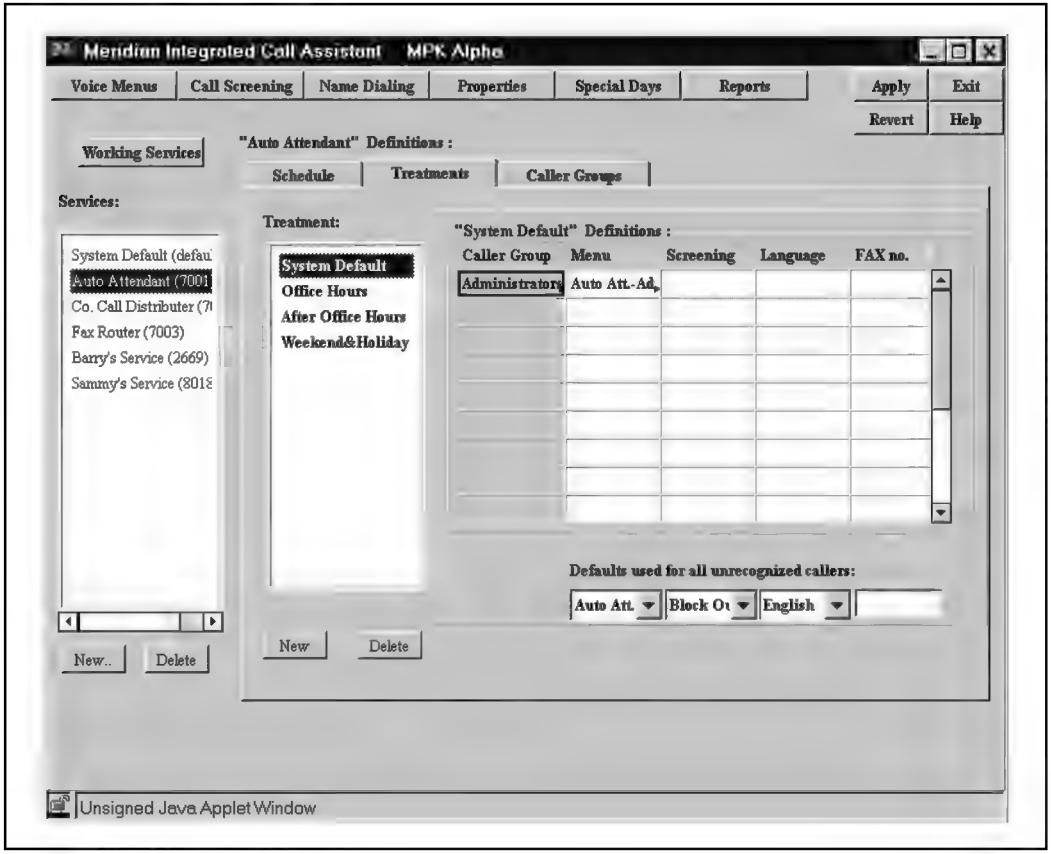


Figure 43
Auto-attendant treatments



The greeting and menu in "Office Hours" treatment: The menu used is called "Auto Att.-office" "Welcome to the Auto Attendant service. Press 1 for number dialing, 2 for name dialing, 3 for operator assistance, press 4 if you wish to be transferred to the express messaging service."

- This service uses greeting prompt 1 and menu prompt 1.
- The MICA properties define the Operator number as 0, and the express messaging number as 5000.
- The "After Office Hours" treatment greeting uses the menu named "Auto Att.-late": "Welcome to the Auto Attendant service. Our office hours are from 9 am to 5 pm. For an emergency press 1. If you wish to be transferred to the express messaging service, press 2." Greeting prompt no. 2 and menu prompt no.2 are used.
- If caller presses 1, MICA transfers call to the Gate House (5500). If caller presses 2, call is transferred to express mail service, x5000.
- The greeting in "Weekend" treatment: The menu used is "Auto Att.-weekend". "Welcome to the Auto Attendant service, our offices are closed today, please call back on a weekday. In case of an emergency press 1". If caller presses 1, call will be transferred to the Gate House (5500).
- Greeting prompt no. 3 and menu prompt no. 3 are used.
- The greeting in "Holiday" treatment uses the menu "Auto Att.-closed" "Welcome to the Auto Attendant service, our offices are closed today, please call back on a weekday."

Menu is defined so that call is disconnected immediately after greeting is played. Caller hears: "Thank you for calling, good-bye" before call is disconnected.

MICA uses Greeting prompt no. 3. On Flash card there is one treatment for Weekend&Holiday: using "Auto Att.-closed".

The greeting for administrator CLID at all times (in all treatments): The menu used is "Auto Att.-admin". "Welcome to the Administrator Auto Attendant service. Press 1 for number dialing, 2 for name dialing, 3 for operator assistance, press 4 if you wish to be transferred to the express messaging service. Press 5 for the administrator interface". MICA uses Greeting prompt no. 4 and menu prompt no. 4.

The default name dialing database contains:

Last Name	First Name	Phone Number
Doe	Jane	2000
Doe	John	2001
Lee	David	2002
Smith	Kevin	2003
Jackson	Paul	2004

Company call distributer (menu-based service)

Service Name: Co. Call Distributer.

Reached by number: 7002

Three treatments in this service:

1. Office Hours (from 9 to 5 Monday through Friday)
2. After Office Hours (all other hours Monday through Friday)
3. Holiday and Weekend (Saturday, Sunday, Jan1st, Dec 25th)

This service uses no caller groups because MICA handles all callers the same way.

Treatment description

Office Hours: uses the menu named Top Level Menu.

In the Top Level Menu if callers press:

0 - MICA transfers call to DN 2000

1 - they reach menu 1

2 - they reach menu 2

3 - they reach menu 3

4 - they reach menu 4

5 - MICA transfers call to DN 5005.

Note: On Flash card, menu 3 and 4 do not exist. If callers press 3 or 4 MICA plays "You have pressed an incorrect digit".

In menu 1:

Caller chooses 1 to be transferred to number 2011

Caller chooses 2 to be transferred to number 2012

Caller chooses 3 to be transferred to number 2013

Caller chooses 4 to be transferred to number 2014

Caller chooses 5 to be transferred to number 2015

In menu 2

Caller chooses 1 to be transferred to number 2021

Caller chooses 2 to be transferred to number 2022

Caller chooses 3 to be transferred to number 2023

Caller chooses 4 to be transferred to number 2024

Caller chooses 5 to be transferred to number 2025

In menu 3

Caller chooses 1 to be transferred to number 2031

Caller chooses 2 to be transferred to number 2032

Caller chooses 3 to be transferred to number 2033

Caller chooses 4 to be transferred to number 2034

Caller chooses 5 to be transferred to number 2035

In menu 4

Caller chooses 1 to be transferred to number 2041

Caller chooses 2 to be transferred to number 2042

Caller chooses 3 to be transferred to number 2043

Caller chooses 4 to be transferred to number 2044

Caller chooses 5 to be transferred to number 2045

The menu names are generic, so this service can really be used for any number of applications. The recordings are more specific, to give a simple example. They may be re-recorded to fit your needs. Multilingual support may be easily provided by recording the same menu/greeting numbers in additional languages, and specifying different languages in the BUI in the treatment window for different caller groups. These menus would use recordings: greetings and menus 5 through 9. Top-level menu uses greeting and menu 5, menu 1 uses greeting and menu 6 etc.

CoGreeting and menu description

Greeting 5: Welcome to the Company Call Director."

Greeting 6: "Welcome to the Sales Department."

Greeting 7: "Welcome to the Service Department."

Greeting 8: "Welcome to the Support department. We will be happy to assist."

Greeting 9: "You have reached the Information Center."

Menu 5: "For a Service Emergency press 0, for Sales press 1, for Service press 2, for Support press 3, for Information press 4. If you would like to leave a message press 5. Press * to replay the menu."

Menu 6: "For Local Sales press 1, for National Sales press 2, for International sales press 3, for General Product information press 4".

Menu 7: "For Local Service press 1, for National Service press 2, for International Service press 3, for Urgent Questions press 4".

Menu 8: "For new product support press 1, for other product support press 2. If you wish to register a complaint, press 4."

Menu 9: "for General company information press 1, for specific product

information press 2, for departmental information press 3, for confidential information press 4."

For "after hours" and "holidays and weekends" treatment will be the same as the "after hours" and "weekends" in the auto attendant example.

Note: For the example, MICA uses the same voice files for Flash Card and Hard Drive. The menu says "for Support press 3, for Information press 4," even on flash card, where these options are invalid.

Fax Router

Service Name: Fax Router.

Reached by number: 7003

The FAX service has five caller groups:

1 VIP (CLID prefix 555, 666, 222-2000).

2 From2or3prefix (CLID prefix 2, 3).

3 From4or5prefix (CLID prefix 4, 5).

4 From6or7prefix (CLID prefix 6, 7).

5 All other callers.

MICA FAX service description

MICA treats all Faxes the same way, differentiating according to CLID only. In the call treatment, The menu used is called "Fax Greeting", which transfers non-FAX callers to the Auto-Attendant service DN 7001 after playing the greeting. Caller first hears: "The call is being transferred to the requested number". Then MICA plays Greeting 10: "Hello, you have reached the Fax Routing service. If you are not sending a fax, please wait while your call is transferred to the Auto Attendant service." MICA routes FAXes as follows:

Faxes from group are transferred to fax number

1 8001

2 8002

3 8003

4 8004

5 Main Company Fax (8000)

First Call Center Front End (ACD Front service)

Service Name: Call Center Front A.

Reached by number: 7004

Five caller groups:

- 0. VIP (CLID prefix 555, 666, 222-2000).
- 1. From 2 or 3 prefix (CLID prefix 2, 3)
- 2. From 4 or 5 prefix (CLID prefix 4, 5)
- 3. From 6 or 7prefix (CLID prefix 6, 7)
- 4. All other callers

Two treatments in this service:

1 Weekdays (Monday through Friday)

2 Holiday and Weekend (Saturday, Sunday, January 1, December 25)

"Weekdays" treatment:

Greeting 11: "Welcome to the Call Center. Your order for product A will be handled by our salesperson in one moment."

Greeting 12: "Welcome to the Call Center. The system recognizes you as a special customer. Your order for product A will be handled by a special salesperson in one moment."

Menus are defined so that call is transferred to appropriate number immediately after greeting is played. Caller hears: "The call is being transferred to the requested number".

"Weekends and Holidays" treatment:

The menu used is called "Call Center closed".

> Greeting 13: "Welcome to the Call Center. Our offices are closed today, please leave a message with your name, number and request, and we will comply."

All calls are transferred to company voice mail box: 5005. The menu names are generic, so this service can really be used for any number of applications. The recordings are more specific, to give a simple example. They may be re-recorded to fit customer needs.

> ***Note:*** On Flash card Caller Groups 2 and 3, and menus CallCenter A3 and CallCenter A4 do not exist.

Table 13
Treatment according to call groups

Callers from group no	hear greeting no	in	and are transferred to DN	menu name
0	12	English	1000	CallCenter A0
1	11	English	1001	CallCenter A1
2	11	English	1002	CallCenter A2
3	11	French	1003	CallCenter A3
4	11	English	1004	CallCenter A4

Second Call Center Front End (ACD Front service)

Service Name: Call Center Front B.

Reached by number: 7005

Five caller groups:

- 0. VIP (CLID prefix 555, 666, 222-2000).
- 1. From 2 or 3 prefix (CLID prefix 2, 3).
- 2. From 4 or 5 prefix (CLID prefix 4, 5).
- 3. From 6 or 7 prefix (CLID prefix 6, 7).
- 4. All other callers.

Treatments:

1 1. Weekdays (Monday through Friday)

2 2. Holiday and Weekend (Saturday, Sunday, Jan1st, Dec 25th)

"Weekdays" treatment description

Greeting 14: "Welcome to the Call Center. Your order for product B will be handled by our salesperson in one moment."

Greeting 15: "Welcome to the Call Center. The system recognizes you as a special customer. Your order for product B will be handled by a special salesperson in one moment."

Menus are defined so that call is transferred to appropriate number immediately after greeting is played. (Caller hears: "The call is being transferred to the requested number").

"Weekends and Holidays" treatment: the menu used is called "CallCenter closed".

Greeting 13: "Welcome to the Call Center. Our offices are closed today, please leave a message with your name, number and request, and we will comply."

Calls are transferred to company voice mail box: 5005.

Note: On Flash card this service does not exist.

Table 14
Treatment according to call groups

Callers from group no	hear greeting no	in	and are transferred to DN	menu name
0	15	English	1010	CallCenter B0
1	14	English	1011	CallCenter B1
2	14	French	1012	CallCenter B2
3	14	French	1013	CallCenter B3
4	14	English	1014	CallCenter B4

"Weekends and Holidays" treatment:

Menu name: "CallCenter closed"

Greeting 13: "Welcome to the Call Center. Our offices are closed today. Please leave a message with your name, number and request, and we will return your call." Calls are transferred to company voice mail box: 5005.

Note: On Flash card this service does not exist.

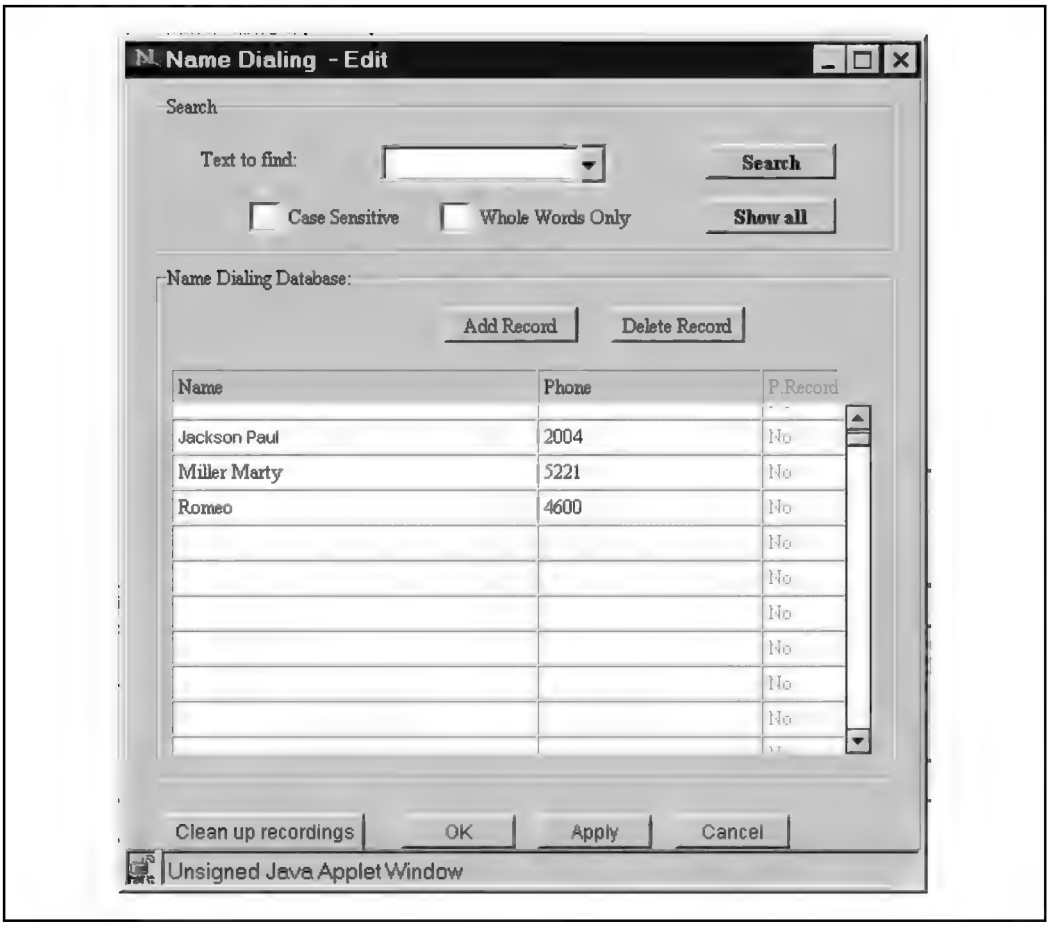
How to create a name dialing database in the BUI

You can create a new database directly on the MICA using the Edit feature in the Name Dialing window. MICA ships with a default five-name database.

Create a name dialing database

1. From the Main window, click the **Name Dialing** button.
2. Click the **Edit** button under the **General Tools** column. MICA opens the default database (see Figure 44).
3. Click the Add Record button.
4. Add the new name and DN, last name first, to the database.
5. If you have the hard disk configuration, set personal recording privileges in the **P.Record** field. This field is "grayed-out" if you have the Flash configuration.
6. To remove the preconfigured names from the default name dialing database, highlight the names and press the **Delete** button.

Figure 44
Name Dialing - Edit window



Import a name dialing database

This chapter explains how to import a name dialing database from a file server to the MICA PCMCIA device. A name dialing database contains the first name, last name and phone number of a group of telephone users. MICA matches the names in the database to the telephone keypad characters entered by callers who select "dial by name."

The name dialing database can contain up to 10,000 names (or 1000 on the FLASH card MICA option). Names can be up to 20 characters long (alphanumeric characters), including the space between the last and first name. Phone numbers may be up to 20 digits long.

You can create a database file using spread sheet or database software, or you can modify the five-name MICA preconfigured default database to create one directly on the card.

Name dialing database import description

To import a name dialing database, you tell MICA the database file name and the name and location of the computer where MICA can find the database. MICA uses File Transfer Protocol (FTP) to find the database and copy it to the PCMCIA device. MICA gives you the option of importing the database automatically using a "wizard", or importing it using a step-by-step method.

How a name dialing database works

For example, Chris Lee wants to reach Alice Wilson at the ABC department store. He calls the store's main number. MICA answers the call and plays a set of prompts. Chris is prompted to select "3" to use the Dial by Name feature.

MICA prompts Chris to enter the last name and then the first name of the person he wants to call. Chris enters 9 4 5. MICA searches the name dialing database for a last name starting with W, X, or Y (corresponds to the 9 key) G, H, or I (corresponds to the 4 key), then J, K or L (corresponds to the 5 key).

MICA finds "Wilson, Alice" in the name dialing database and checks if Alice Wilson has a personal verification recording. If yes, MICA plays it and Chris hears Alice's voice. If Alice does not have a recording, MICA plays "transferring call to A-L-I-C-E W-I-L-S-O-N (pronouncing each letter of the name).

For dial-by-name, Caller may press 1 after name dialing to skip the announcement preceding the call transfer.

> ***Note:*** In name dialing, the Q is represented by 7 and Z by 9.
>
> ***Note:*** Callers can press the # sign twice to bypass the "call is being transferred to" announcement.

* returns callers to the main menu.

If you have the Flash option, MICA plays the spelled name to the caller.

Before you import a name dialing database

1. Create a telephone database. Use spreadsheet or software application in which you can save a file in an ASCII format.
2. Save the telephone database in a "Delimited" format. This can include spaces, commas, tabs or other characters. Your spreadsheet or database software may also require you to save the file "for import". Follow the instructions for the software package to prepare the database.
3. Check that your computer has File Transfer Protocol (FTP) client. An example often found on a Windows 95 computer is FTP95PRO. If your computer has file server protocol, place the database in a location where it can be FTPed from.

4 MICA prompts you for the following network-related information in Step 1 of the name dialing import Wizard. Contact your system administrator as required:

   a Host IP address (names and aliases are not supported).

   b FTP user name

   c FTP password

   d File name (full path)

5 Transfer mode (select ASCII)

6 Upload the telephone database to a file server according to the procedures required by your FTP software.

7 Note the directory path where the database is stored. MICA requests the path in the import procedure. An example of a directory path is: DATABASE/January/database1.

Database format requirements

- The database must be an ASCII file up to 1 Mbyte for Flash and hard disk configuration
- Lines must contain at least name and number fields, one name and number per line. If there are more, only the first will be incorporated into the converted file. Additional information is in the line is ignored
- Lines must end with newline character
- Divide lines into fields/columns in one of two ways

  Fixed - fields begin at predefined offsets that create columns

  Delimited - fields are separated by one appearance of a printable character defined as a delimiter.

  Divide lines into fields/columns using the same rule in all lines.
- Phone numbers cannot include alphabetical characters.
- MICA ignores lines that do not meet the requirements. You can specify certain lines to be ignored by defining the following:
- Note the number of line in the database that conversion should begin on. For example, if the second line of the database holds the first name, you tell MICA to begin conversion on Line 2.
- Define a character or string of characters that, when appearing at the beginning of the line, indicate that it should be skipped
- Do not to enter identical names, since caller using name dialling has no way to tell the two names apart. In addition, the database should not contain more than five names with identical keypad spelling. The system does not present lists of found names during name dialing if it is longer than five.

How to use the Name Dialing Import Wizard

The Wizard automates the database import process. You enter information about the database location and format. MICA locates and copies the database, then converts it into a format MICA can understand and use. If you have problems using the wizard, turn to "FTP server description and requirements" on page 166. Figure 45 shows the Name Dialing window and identifies the components. Table 45 describes the components. At different stages of the import process, some buttons are grayed-out to ensure you do not perform an action in the wrong order. For example, you cannot "Convert File" a database before you "Get File".

1 Login to the MICA Browser User Interface.

2 From the Main window, click the **Name Dialing** tab.

Figure 45
Name Dialing screen components

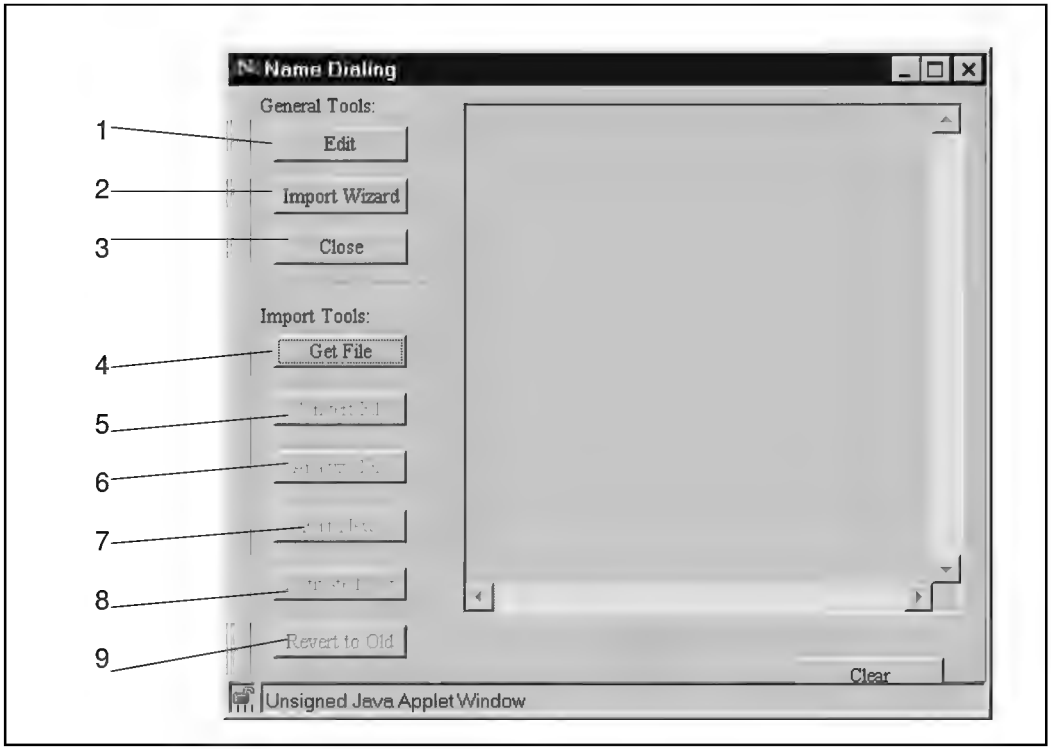


Table 15
Name Dialing window component description

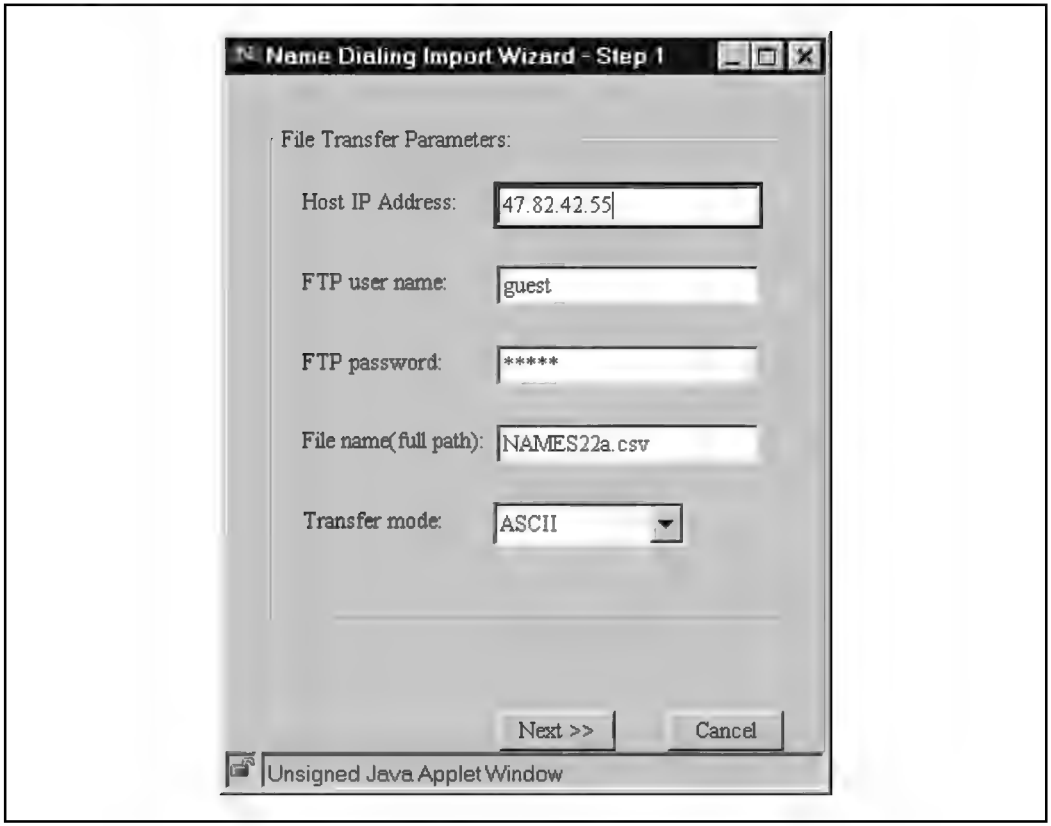
Number	Name	Description
1	Edit	Click to open the Edit window. MICA displays the existing database. If you have not modified a database, the Edit window displays the MICA five-name default database.
2	Import Wizard	Click to begin the name dialing database import wizard process. MICA displays the screen called **Name Dialing Import Wizard Step 1**.
3	Close	Click to close the Name Dialing window.
4	Get File	Click to open the **Get File** window and import the database without converting it.
5	Convert File	Click to open the **Name Dialing Convert File** window. The windows prompt you to enter information about the database configuration, such as the delimited format used and other settings.
6	Analyze File	When you click this button, you see the **Convert File** windows. You enter the data required in those windows and press OK. Then you see the **Name Dialing Analyze File** window. This tool debugs the imported file if there are problems in the conversion process. The tool generates an annotated file by adding a character to the start of each record. A + indicates the records processed successfully. A - indicates MICA skipped the record.
7	Edit New	Click to open the **Name Dialing Edit New** window. You can view edit the new imported file before you activate it.
8	Activate New	Click to activate the new imported file after MICA converts the file to the internal format.
8	Revert to Old	Click to activate the old database. The New database remains New.

Import Wizard Step 1 - Define File Transfer Parameters

When you perform Step 1, you define the settings MICA uses to import the datase.

1 From the **Name Dialing** window, click **Import Wizard.** MICA displays the **Step 1** window (see **Figure 46**).

Figure 46
Step 1 - define file transfer parameters



2 Define the File Transfer parameters:

a **Host IP address** - type in the IP address of the file server where you store the name dialing database.

b **FTP user Name** - type in the user name assigned to you by the server administrator. MICA uses the name to access the server.

c **FTP password:** type in the password assigned to you by the server administrator. MICA uses this password to access the server.

d **File name(full path):** This information defines the location of the database on the server. In this example, the database file name is NAMES22a.csw. In the example, MICA looks on the server at IP address 47.82.42.55 for a file named NAMES22a.csw.

e Leave the default transfer mode set to ASCII.

Note: You must type in the Host IP address, not a name or an alias.

3 Press **Next.** MICA displays the window for Step 2.

Step 2 - Define Data Type of the imported File

In this tab (see Figure 47), you select some of the parameters of the name dialing database. If required, you can change the row where MICA begins to import the records, and if you want MICA to ignore any rows.

1 Click **Delimited** or **Fixed Width**, depending on the format you used to separate the fields in your database.

2 **Start import at row:** If you want MICA to begin to import rows on a row different from 1, click in the box and type in the new row number.

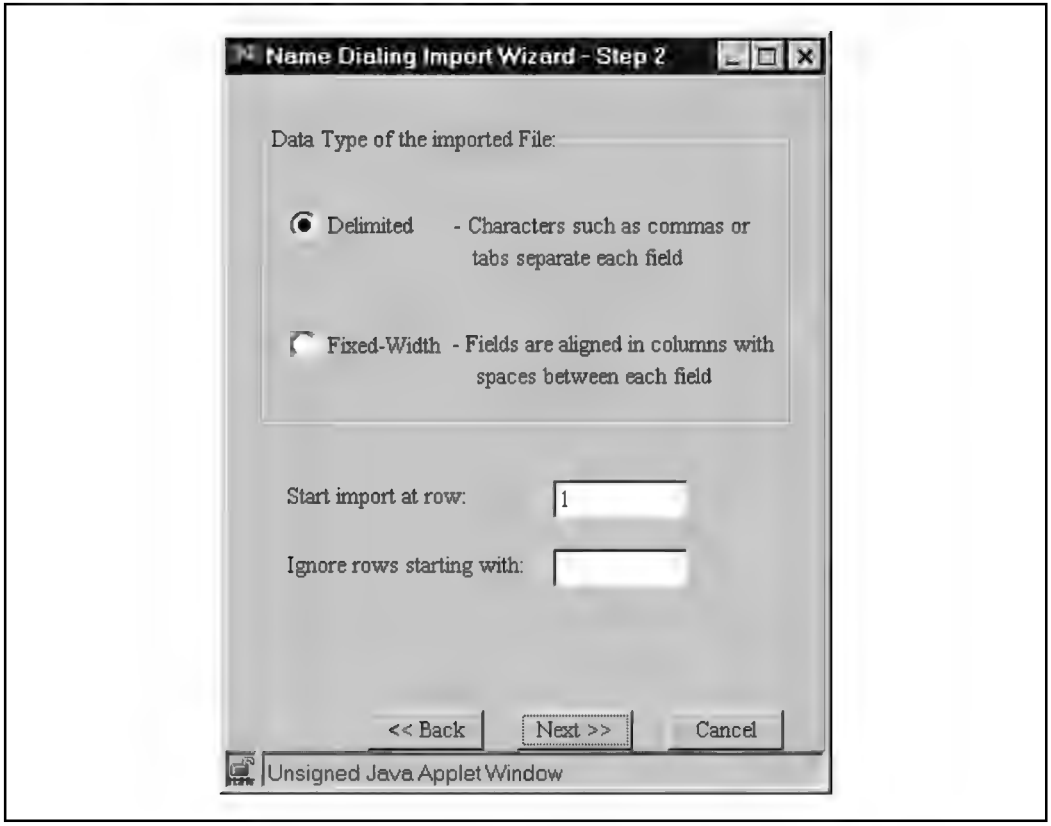
3 **Ignore rows starting with:** If you want MICA to ignore certain rows, enter the character that defines those rows in this box

4 Press **Next**.

If you selected **Delimited**, MICA displays the window you use to set the options for a Delimited database. If you selected **Fixed width**, MICA displays the window you use to set the options for a Fixed Width database.

Note: Each window is labeled **Name Dialing Import Wizard - Step 3.**

Figure 47
Step 2 - select data type of the imported file


Name Dialing Import Wizard - Step 2
Data Type of the imported File:
Delimited - Characters such as commas or tabs separate each field
Fixed-Width - Fields are aligned in columns with spaces between each field
Start import at row:
1
Ignore rows starting with:
<< Back
Next >>
Cancel
Unsigned Java Applet Window

Step 3 - Define File Format Parameters (Delimited File)

When you enter information in a "delimited" telephone database, you "delimit" or separate, the last name, first name and phone number information by a space, comma, tab, semicolon or other character.

In Step 3, you tell MICA which character or characters you used to separate the information in your telephone database. The examples show different ways to separate information in a telephone database. The examples use spreadsheet software, but MICA does not require you to use a spreadsheet.

Fields and delimiters description

Each appearance of any delimiter character indicates the end of a field. For example, if a comma is a delimiter, three consecutive commas are seen as three fields.

Example 1 - tab-delimited database

In Figure 48, there are three columns of information. The information in each tab is separated by a tab. To MICA, this database has three fields.

Figure 48
Tab-delimited database in a spreadsheet

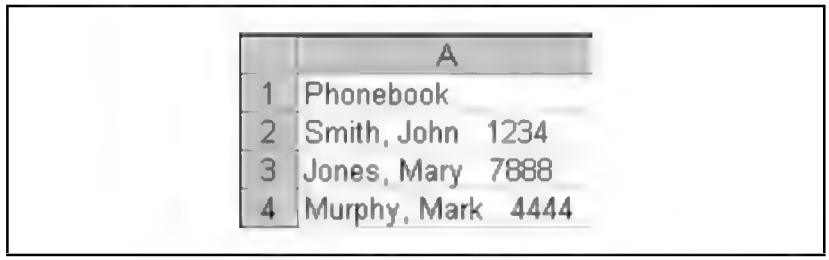
	A	B	C
1	**Last Name**	**First Name**	**Phone Ext.**
2	Smith	John	1234
3	Jones	Mary	7888
4	Murphy	Mark	6522

Example 2 - comma-delimited and space-delimited database

In Figure 49, the last and first names are separated by a comma and a space. Four spaces separate the last name and phone number. To MICA, this database has seven fields:

- Smith is field 1. The comma after Smith ends filed 1
- The space after the comma ends field 2
- John is field 3
- The first space after John ends field 3
- The next three spaces end field 4, 5 and 6.
- The phone number 1234 is field 7.

Figure 49
Comma-delimited and tab-delimited database



Define the delimiters for your database

The procedures in this section use Example 2 as a guide.

1 In **File Format Parameters** click on the delimiter(s) for your database. You can select more than one delimiter (see **Figure 50**)

2 In **Fields Relative Positions in the Data Record,** you specify the field numbers that contain the last name, first name and phone number in your database.

   a **Last Name**: Select 1 from the drop-down menu. Field 1 in the Example 2 database contains the Last name.

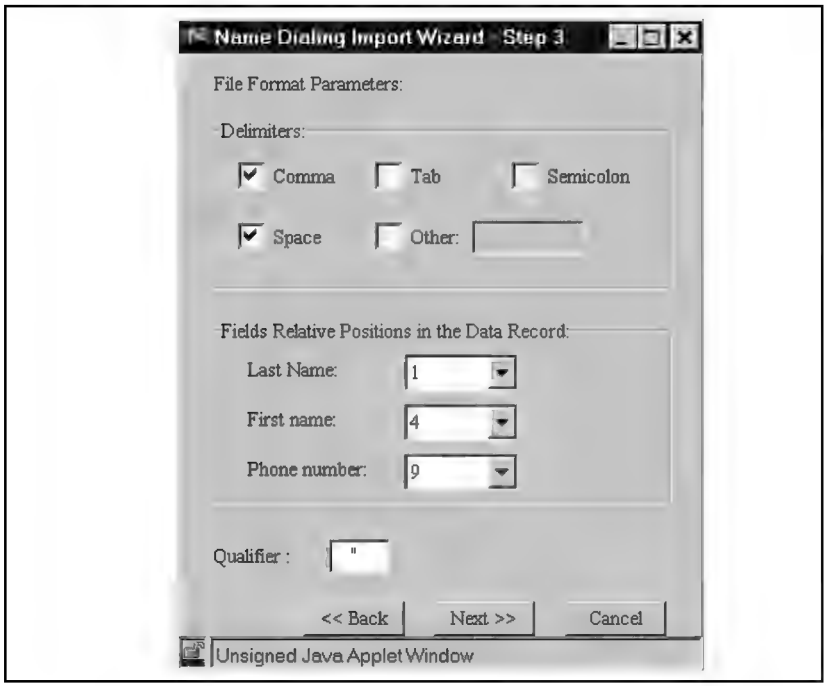
   b **First name**: Select 3 from the drop-down menu. Field 3 in the Example 2 database contains the First name.

c **Phone number**: Select 7 from the drop-down menu. Field 7 in the Example 2 database contains the Phone Number.

3 Leave **Qualifier** in the default setting.

4 Press **Next.**

Figure 50
Name Dialing Import Wizard - Step 3 (based on Example 2)



Define file format parameters for a fixed width file

If you chose fixed width file format, you define the position and length of the fields in a database (see Figure 51). Set the parameters for last name, first name and phone number as described below.

Offset file explanation

An offset file is any file that is created in a table format. the characters are flush left and are of a fixed width. The word offset means the number of spaces between the margin of the table column and the first character. If the first column in the table is 11 characters wide and you press the space bar twice before you type in the last name, the offset for column 1 is 2 and the field length is 9.

1 Click in the box for **Last Name: Start Offset.**

2 Enter the start offset position of the Last name. The field accepts digits between 0 and 256.

3 Click in the box for **Last Name: Field Length.**

4 Enter the field length of the Last name. The field accepts digits between 0 and 256.

5 Click in the box for **First Name: Start Offset.**

6 Enter the start offset position of the First name. The field accepts digits between 0 and 256.

7 Click in the box for **First Name: Field Length.**

8 Enter the field length of the First name. The field accepts digits between 0 and 256.

9 Click in the box for **Phone Number: Start Offset.**

10 Enter the start offset position of the Phone Number. The field accepts digits between 0 and 256.

11 Click in the box for **First Name: Field Length.**

12 Enter the field length of the Phone Number. The field accepts digits between 0 and 256.

13 Press **Next**.

Name Dialing Import Wizard - Finish

After you define the FTP settings and database parameters for the file you want to import, MICA prompts you to activate the Wizard (see Figure 52).

1 Press **Finish** to activate the Import Wizard. MICA imports the file, converts it and activates it. MICA displays messages describing the import progress status.

Figure 51
File format parameters for a fixed width file - Step 3

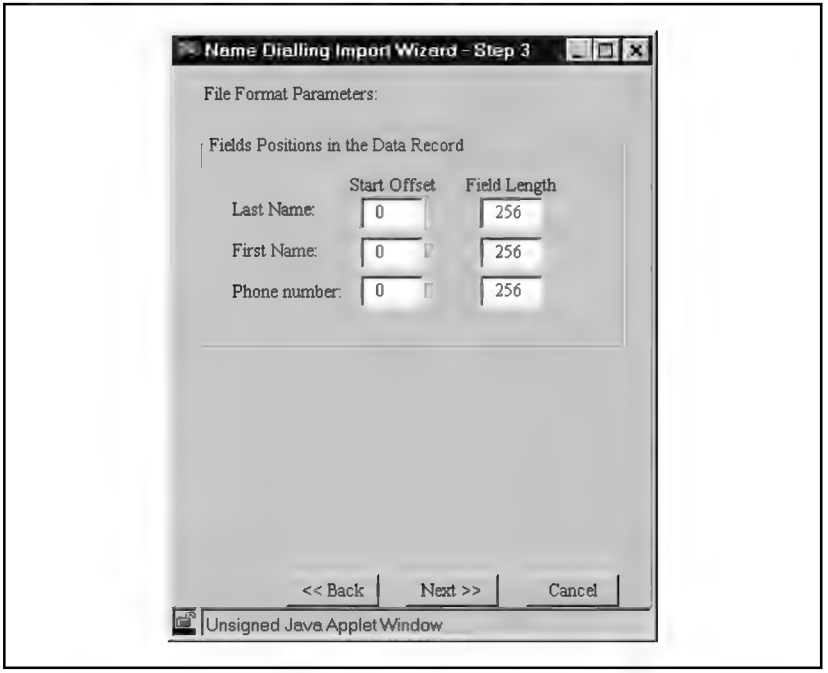
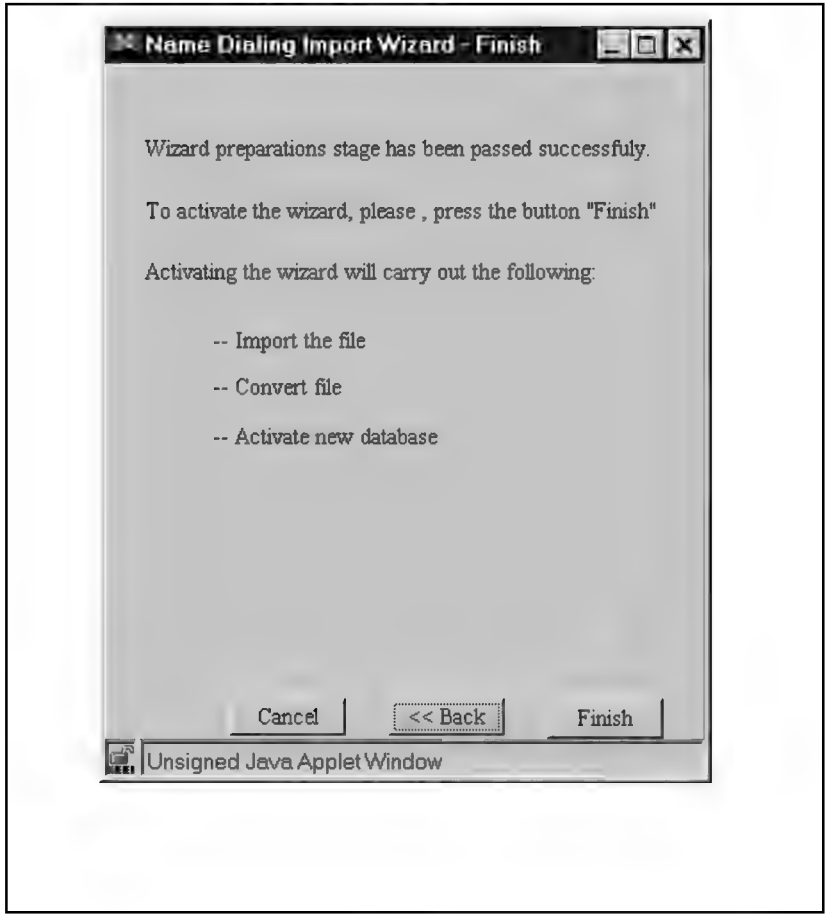


Figure 52
Name Dialing Import Wizard - Finish


Name Dialing Import Wizard - Finish
Wizard preparations stage has been passed successfuly.
To activate the wizard, please , press the button "Finish"
Activating the wizard will carry out the following:
-- Import the file
-- Convert file
-- Activate new database
Cancel
<< Back
Finish
Unsigned Java Applet Window

How to import a database using the Import Tools

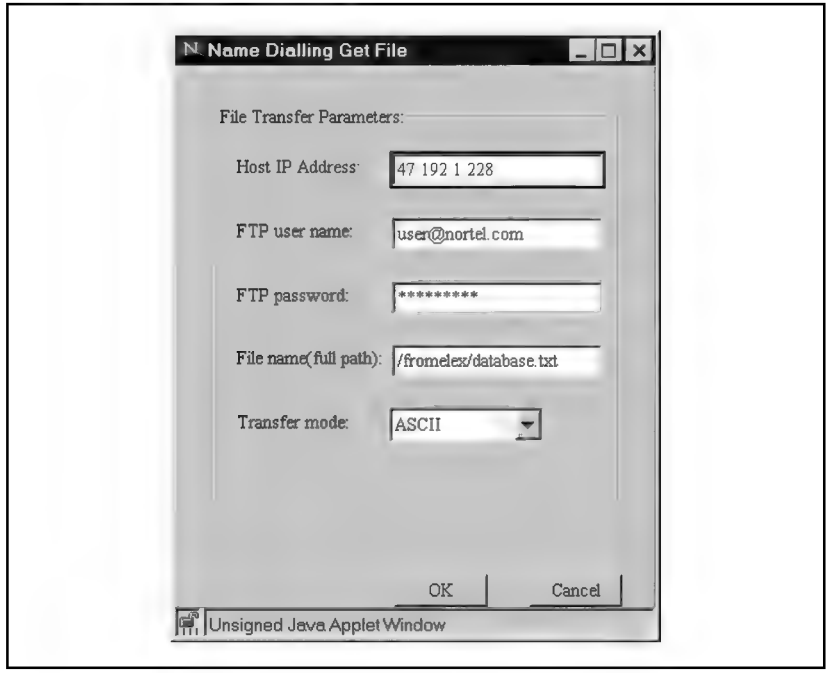
When you use the Import Tools, you perform the steps that the Import Wizard carries out automatically.

Get File

1. From the **Name Dialing** window, press the **Get** button.
2. MICA displays **Name Dialing Get File** screen (see Figure 53).
3. Define the File Transfer parameters:
   - **a** **Host IP address** - type in the IP address of the file server where you store the name dialing database.
   - **b** **FTP user Name** - type in the user name assigned to you by the server administrator. MICA uses the name to access the server.
   - **c** **FTP password:** type in the password assigned to you by the server administrator. MICA uses this password to access the server.
   - **d** **File name(full path):** This information defines the location of the database on the server. In this example, the database file name is NAMES22a.csw. In the example, MICA looks on the server at IP address 47.82.42.55 for a file named NAMES22a.csw.
   - **e** Leave the default transfer mode set to ASCII.

   Note: You must type in the Host IP address, not a name or an alias.
4. Press **OK.** MICA imports the name dialing database and stores it in its original format, without converting it.

Figure 53
Name dialing Get file screen



Convert File

This tool converts a new name dialing file from its original format to the internal format MICA uses to respond to dial-by-name requests. It assumes that the file is already in the card.

1. From the **Name Dialing Database** window, press Convert.
2. MICA displays a window labeled **Convert File - Step 2.** To convert the file, read the information and perform the steps described in "Step 2 - Define Data Type of the imported File" on page 152 and in "Step 3 - Define File Format Parameters (Delimited File)" on page 154 or "Define file format parameters for a fixed width file" on page 156.
3. Press **OK** when you finish.

Analyze File

This tool debugs the imported file if MICA found problems in the file conversion process. The Analyze file tool generates an annotated file by adding a + or a - to the start of each record. If the record is marked with a +, it was accepted. If it was marked with a -, it was rejected. The Analyze button first displays the convert windows described above, so user can enter the appropriate data. Then file is analyzed and MICA displays the results.

1. Press the **Analyze File** button.
2. MICA presents the windows described in the **Convert File** section.
3. Enter the database parameters for the converted file.
4. Press **OK.**

Edit New

This tool is used for viewing and editing the new imported file after you convert it and before you activate it.

Activate New

This tool activates the new imported file after it has been converted to the internal format.

Revert to Old

This tool reverts name dialing operation to the old database, i.e. the database before the last import operation. In other words, it is 'Undo' of the last 'Activate New' operation. It may be used when an 'Import' operation caused problems in name dialing functionality.

Edit

In the **Edit** window, you can perform the following tasks:

- Add a record
- Delete a record
- Modify a record
- Search for a record
- Clean up recordings

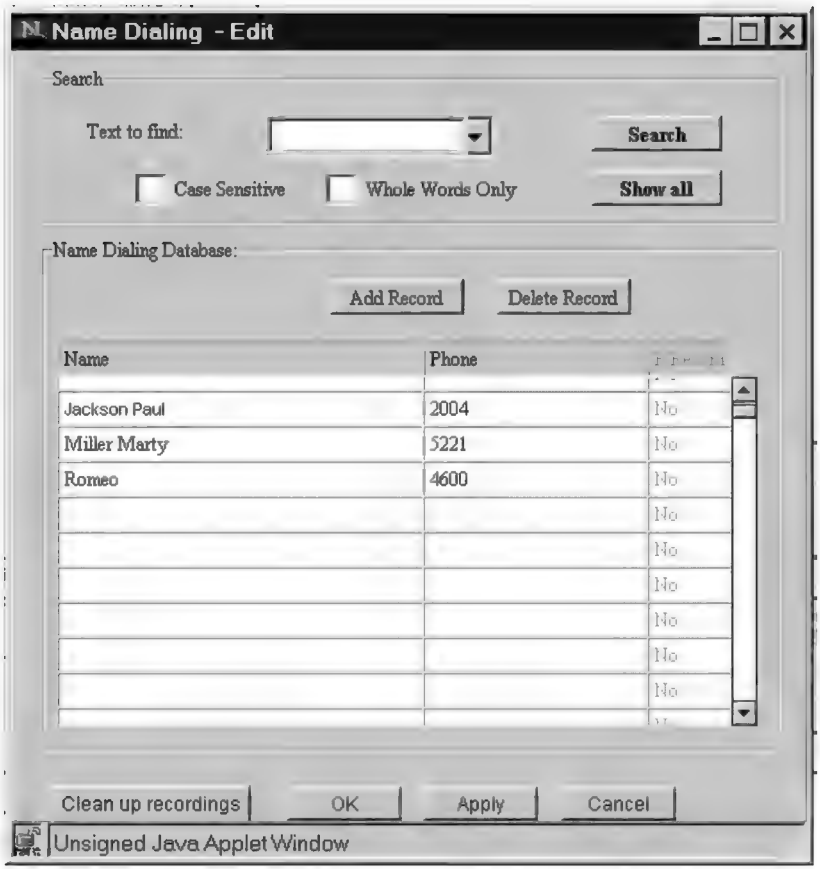
From the **Name Dialing Database** window, click on the **Edit** button. MICA displays the internal name dialing database. MICA sorts the names alphabetically, not according to people's names, but according to the telephone digits entered by callers who use the MICA dial-by-name feature to spell the name. In Figure 54, you see that Newman Paul is listed before Miller Marty. When callers select the MICA dial-by-name option, callers press 6 3 9 on the telephone keypad to spell N E W. Callers press 6 4 5 to spell M I L. MICA sorts according to the telephone keypad spelling, so 6 3 9 (NEW) comes before 6 4 5 (MIL).

If possible, avoid identical names in the name dialing database. If possible, the database should not contain more than five names with identical keypad spelling. MICA presents only the first five names found that have identical keypad spelling.

About the P. Record column

The P. Record column lists the personal verification recording permissions (Yes or No) for a specific DN of up to seven digits. MICA allows only 3000 personal verification recordings on the hard disk configuration. The Flash configuration does not allow any personal verification recordings. Permissions are granted only by DN, not by subscriber name. If you import a new phonebook with the same subscriber names but different DNs, you manually update the definitions of allow/deny recordings.

Figure 54
Edit window



Add a record

1. Click the **Add Record** button. MICA highlights a blank line in the database.
2. Enter the new name, last name first.
3. Press Apply.

Delete a record

1. Click in the record you want to delete.
2. Click the **Delete Record** button.

Modify a record

1. Click in the **Name** or **Phone** column of the record you want to modify.
2. Make the modification.
3. Press **Apply.**

Search for a record

1. Enter the name in the **Text to find:** box
2. If required, click in the **Case Sensitive** and/or **Whole Word Only** checkboxes.
3. Press **Search.**

   MICA displays the search results. To view the entire database, press **Show All.**

Clean up recordings

In the hard disk configuration, the Edit window includes a button labeled "Clean up recordings." This button is not available in the Flash configuration.

If you press this button, MICA matches the personal recordings against the database and erases any recordings for people who are not in the database.

FTP server description and requirements

The list below describes the FTP servers MICA supports from which you can import a database:

- Serv-U 2.5
- BisonFTP
- Express FS Server
- WFTPD
- Niteserver 1.0
- Hummingbird Communication
- TYPSoft FTP server 0.41b
- SunOs (UNIX)

Here is a list of possible server and user requirements for MICA. Your particular server requirements can be different. Consult server documentation.

- Be sure you can configure the IP address and the port it "listens" on.
- Set IP address to the same as host computer (PC) and set port to 21. If the FTP SERVER and the MICA are in a different subnet on the network, set up the network to allow access. Set up the PC's network access (Gateways) to the needed configuration. You can run several servers, each on different port. Some programs even implement that multi-server feature. MICA can only access the 21 port server.
- Make sure the server administrator has created a user name, password for you and has identified privileges (Telnet, FTPD, for example) for you.
- The user must be allowed to access the phonebook file or its directory.
- The user should be allowed to place the file into the home directory or one of its subdirectories. When you import the file, you enter the path of the file relative to its home directory. This process is important because some servers may deny full/absolute path access or use virtual file system, where absolute path has no meaning.

- User should type full path only if the file located out of home-dir or on different drive, and he or she still has access to it. Some servers implement only part of the client-server negotiation commands. You must use the server that supports the dialog shown in Figure 55 after client connects to its 21 port.

Import process FTP interface example

Figure 55 provides an example of the FTP commands executed by the Import wizard as it locates and copies the name dialing database. You do not see these commands. In Figure 55, "ftp>" indicates the commands the MICA "Import" actually executes. The rest is server response. If you have problems using the wizard, make sure your FTP server can provide the information required by the Import wizard. It is important that the "status codes" (such as 226, 150 etc.) are the same as in the example for "ftp", "ascii" and "get" commands. If they are not, the Import Wizard fails. MICA protects itself from importing a file larger than 1 Mbyte file. This protection is based on the server's answer to the dir command, which reports the file size. If the "dir" command is not correctly implemented, MICA imports the file regardless of its size. A correctly formatted "dir" response is shown below:

```
-rw-r--r--  1 user     group        409 Jun 18 07:56 PHONBOOK.TXT
```

Figure 55
Example of FTP commands executed by MICA Import Wizard

```
>ftp 141.226.15.155

>ftp 141.226.15.155
220 Serv-U FTP-Server v2.4a build 3 for WinSock ready...
User (127.0.0.1:(none)): u
331 User name okay, need password.
Password:
230 User logged in, proceed.
ftp> ascii
200 Type set to A.
ftp> dir phonbook.bat
200 PORT Command successful.
150 Opening ASCII mode data connection for /bin/ls.
-rw-r--r--   1 user     group         409 Jun 18 07:56 PHONBOOK.TXT
226 Transfer complete.
ftp> get phonbook.bat phonbook.ext
200 PORT Command successful.
150 Opening ASCII mode data connection for phonbook.txt (409 bytes).
226 Transfer complete.
ftp> bye
221 Goodbye!
```

Configure the Telephone User Interface

This chapter explains how MICA subscribers and administrators access and use the Telephone User Interface (TUI) to record personal verifications, customized greetings and menus.

> ***Note:*** The Flash version of the MICA does not permit personal verification recordings because of space limits. Administrators record greetings and menus.

About the TUI

The TUI operates on a prompt-response basis. Subscribers and administrators press telephone keypad keys and/or record their voices in response to prompts. The basic TUI prompts are pre-recorded and stored on the MICA PCMCIA device in a file. Customers with a MICA configuration allowing multiple service number DNs can have a Service Number DN specifically designated for TUI recording.

If you define a separate number for recording, all calls to the service associated with the recording DN reach the same menu, which answers with "please press any digit to begin recording process" or a similar statement. All keys and timeout actions defined for the recording DN have the default action defined as "go to recording application" in the BUI. It is not necessary to define all keys - just define default action as "go to recording application" in the BUI Voice Menus tab.

If you want to return to the previous TUI menu, press the * key. When the TUI prompts you to enter more than one digit, always press the # key after you enter the last digit.

If you press Save to overwrite an existing file and MICA is playing that file, for example you record a new greeting while MICA plays it for a caller, MICA does not save the new recording. MICA plays a prompt that says "Save failed". You must record the new greeting again.

Personal verification recordings

Personal Verification Recordings play back the subscriber's greeting in the subscriber's voice when the caller accesses the Dial By Name menu. The recording may be up to three seconds long and must be made from the DN associated with the person's name in the name dialing database.

Administrators can record personal verifications for many subscribers in one call. They can record the verifications from any phone.

> ***Note:*** In the hard-disk configuration, MICA can support up to 3000 personal verifications up to three seconds long. If more than 3000 names are defined in the name dialing dialog box, the administrator defines which subscribers may have personal verifications.

How to access the TUI

Subscribers access the TUI by dialing a DN that includes a recording option defined in the main menu that leads to the recording procedure. For example, subscribers dial 4000 and hear the MICA main menu, which includes "press 4 to begin recording." Any DN can include the menu for the recording option. If you use multiple DNs, you can set up a service for recordings, where all actions lead to the recording option. Subscribers must access the TUI from the phone associated with their name in the name-dialing database. The administrator provides subscribers with the DN. Subscribers can only record personal verifications. Administrator access the TUI by dialing the same DN and entering the administrator's password (default 000000). The administrator's password can be changed in the BUI Properties sheet.

How to make a personal verification recording

This section describes two ways to record a personal verification.

Example 1 - Personal verification recording permitted

MICA has multiple DNs and has designated one for recording. The administrator has entered Chris Smith's name and primary DN (4002) in the Name Dialing Database and has allowed Chris to record a personal verification. Chris must use his primary DN as entered in the Name Dialing Database to make the recording. Meridian 1 resources support CLID.

1 Chris Smith dials the Sales Department Recording Service DN (8000) and is prompted to press any number to begin recording.

2 Chris presses 3 and hears:

"Please enter the administrator password followed by #, or press # to record your name"

3 Chris presses #.

4 He is prompted to enter his phone number. He enters 4002.

5 Chris hears:

6 "Please say your name after the tone. To end recording, press #"

7 Chris waits for the tone, then says: "Chris Smith, Sales Manager, Extension 4002". He presses the # key and hears: "Press 2 to play the recording, 1 to retry, number-sign to save"

8 Chris presses # and hears "Recording saved".

9 Chris hangs up.

A caller to the Sales Department who used Dial-by-Name would press the characters "CHR" (247) on the keypad and then hear:

"The call is being transferred to: Chris Smith, Sales Manager, extension 4002"

Example 2 - Administrator recording

In this example, MICA is in the hard drive configuration, uses a Hunt application and has one service DN (7000). The administrator has entered Chris Smith's name and primary DN (4002) in the Name Dialing database in the BUI. The Meridian 1 does not have Caller ID resources. On the Flash option, MICA offers dial-by-name and plays the spelled name to the caller.

1 Administrator dials the Service DN (7000) and hears:

"Press 1 for number dialing, 2 for name dialing, 3 for assistance (transfer to operator), 4 for recording procedure".

2 The administrator presses 4. and hears "please enter the administrator password followed by #". She enters the password and hears:

"Welcome to the administrator interface. To record subscribers' personal verifications, press 1".

3 The administrator presses 1 and hears:

"Please enter the subscriber's number".

4 Administrator enters 4002# and hears:

"Please say the subscriber's name after the tone. End recording by pressing #".

Administrator continues to record each subscriber's personal verification and follows prompts to save and exit recordings.

Recording greetings and menus

Only the administrator can record greetings and menus that are played to callers when MICA answers an incoming call. Each greeting and menu must be recorded in the language it will be used in. For example, you would record the greeting "Welcome to Moore Company" in English and again in French ("Bienvenue a Moore Company"). It is recommended that administrators record greetings and menus before composing the voice menu in the BUI. You can also create the list of prompts in the Voice Files Manager in the BUI and then proceed with the actual recording.

Before recording each greeting or voice menu, the administrator enters the serial number of the language in which the recording will be done and an identifying number for the greeting/menu (a number between 1 and 32 or 1-16 for the Flash option). This identifying number must then be used in the BUI when defining menus to indicate which voice files to play for each menu. Recording the same greeting/menu in different languages is done in different recording sessions. A different language number is entered each time, but the same identifying number for the greeting/menu is used.

1. Administrator dials TUI DN and enters administrator's password (000000).
2. Administrator is presented with a menu:
3. Press 1 to record subscribers personal verifications
   - Press 2 to record menus.
   - Press 3 to record greetings.
   - Press 4 for override activation or deactivation.
4. Administrator selects a task and follows prompts to complete recording process.

About the emergency menu

When the administrator activates the MICA emergency menu, all customers hear one greeting and set of options, regardless of the dialed number, time of day etc. The administrator accesses the emergency menu activation or deactivation settings by pressing "4" in the TUI administrator interface.

MICA ships with a default emergency menu that offers number dialing and a recording application.

If you plan to deactivate the emergency menu by phone, include a recording option when defining the option in the BUI.

When the administrator activates the emergency menu:

- All callers who reach the MICA will hear the emergency greeting/ menu and will have the options defined therein.
- All FAX calls reaching the MICA are transferred to the system default FAX number.
- The call screening chosen when the override menu is defined in the BUI is used for all calls.
- All system voice prompts are played in the first language in the language set.

How to record an emergency menu

1 Administrator dials TUI and enters administrator's password (000000).

2 MICA presents the Administrator menu:

— Press 1 to record subscribers personal verifications.

— Press 2 to record menus.

— Press 3 to record greetings.

— Press 4 for override activation or deactivation.

3 Administrator press 2 or 3 as if to record a general greeting or menu.

4 Administrator hears: "Please enter the language number (or greeting/ menu number) or press 0 for to record emergency prompt."

Note: System requests the language number in the hard disk configuration and asks for the greeting/menu number in the FLASH configuration.

5 Administrator presses 0. The override greeting/menu is recorded only once. If multilingual support is needed, message may be repeated in different languages in the same recording.

How to activate the emergency menu

1 Administrator presses * to return to the main menu and hears

— Press 1 to record subscribers personal verifications

— Press 2 to record menus

— Press 3 to record greetings

— Press 4 for override activation or deactivation

2 Administrator presses 4. MICA announces the present state of the emergency menu and plays "Press 2 to activate the emergency menu" or "press 1 to deactivate the emergency menu."

About caller input

MICA accepts digit input while playing a greeting, so an experienced caller can immediately input the appropriate digit and reach the desired option.

In the TUI, the * key can send users to the previous menu. In voice menus, the default definition for the * key is to replay the previous menu.

For system menus, such as dial-by-name or dial-by-number, press the * key to return to the main menu as long as the system prompt is playing.

If you have custom menus, you can define a customized function for the * key.

Callers who use dial-by-number can press the # key twice to bypass the "call is being transferred to" announcement.

Callers who use dial-by-name can press 1 after name dialing to skip the announcement preceding the call transfer.

The # has specific meaning in name dialing and cannot be used to skip the announcement.

Administration

MICA administration is carried out through a Command Line Interface (CLI). The MICA CLI administration menu offers five submenus:

- System Administration (SAdmin)
- System Maintenance (SMaint)
- Protected Administration (PAdmin)
- Port Maintenance (PMaint)
- Logout (LOgout)

You select a menu, then enter prompts to carry out tasks. This section lists the menus and describes each menu prompt.

How access the MICA administration CLI

- Connect a terminal directly to the MICA adapter TTY port.
- Login to the MICA adapter TTY port using a modem.
- Use Telnet or similar software to access MICA through the Ethernet connection. If you need help using Telnet, contact your system administrator.

If you forget your CLI password

If you change your password from the default user, perform these steps:

1 At the CLI login window, enter **rst**

2 MICA prompts you for the keycode. For help entering the key code, See “Enter the key code and login” on page 48.

3 If MICA validates the keycode, the password is reset to the default: **user**

Navigation Guidelines

- Type in the first two letters of a menu item to open it. For example, to select SAdmin from the main menu, type in SA and hit return. The menus are not case-sensitive.
- Type in /, at any menu prompt to return to the main menu.
- Press the? to access the Help menu.
- When you Save a change, it is saved immediately.
- Type a * at any menu prompt to return to the previous menu.
- Enter a . to end a command dialog session, such as a report.

Menu descriptions

Tables 16 and 17 describe each MICA administration menu. Access all administration menus from the CLI Main Menu.

MICA menu

Table 16
MICA menu

Prompt	Description
SAdmin	System administration directory.
SMaint	System Maintenance directory.
PAdmin	Protected Administration directory.
PMaint	Port Maintenance directory.
LOgout	Logout.

System Administration (SAdmin) menu

Table 17
System Administration (SAdmin) menu description

Prompt	Description
SYstem	System attribute editor.
card	enter up to eight characters to change card name. New name presented on next login.
subnet mask	set or change subnet mask address.
gateway address	set or change gateway address.
IP address	set or change IP address.

System maintenance menu

Table 18
System Maintenance menu description

Prompt	Description
ARchivdb	Backup customer's database.
REstordb	Restore customer's database.
CRestart	Restarts the MICA.
?	Help menu

Protected Administration menu

Table 19
Protected Administration (PAdmin) menu description (Part 1 of 2)

Prompt	Description
PSweditor	Password Editor - Allows modification of the CLI administrator password (which is also used as FTP password) with user "user"
FUpgrade	Functionality upgrade allows modification of the number of ports being used on the card. Saving modification must be accompanied by insertion of a new keycode. This command offers to reset card since card must be restarted in order for this change to take effect properly.

Table 19
Protected Administration (PAdmin) menu description (Part 2 of 2)

Prompt	Description
SWupgrade	Software Upgrade - SWupgrade allows upgrading the card's firmware by copying it from a PCMCIA or Flash card inserted in the upper slot of the card. New firmware takes effect after the card is restarted. If it is a new firmware release (indicating major feature changes), a new keycode will be requested upon reset.
ABreset	Administrator BUI Reset - Used to return the administrator BUI login and password to their default values: "admin" and "000000" respectively.
SCReen	SCReen - used to "lock" or "unlock" screening tables, preventing or allowing their modification from BUI. This command has one parameter: u - unlock, l - lock, or p - print (prints current situation). By factory default screening tables are unlocked.

Port Maintenance menu

Table 20
Port Maintenance (PMaint) menu

Prompt	Description
PStatus	Display status of all MICA ports.

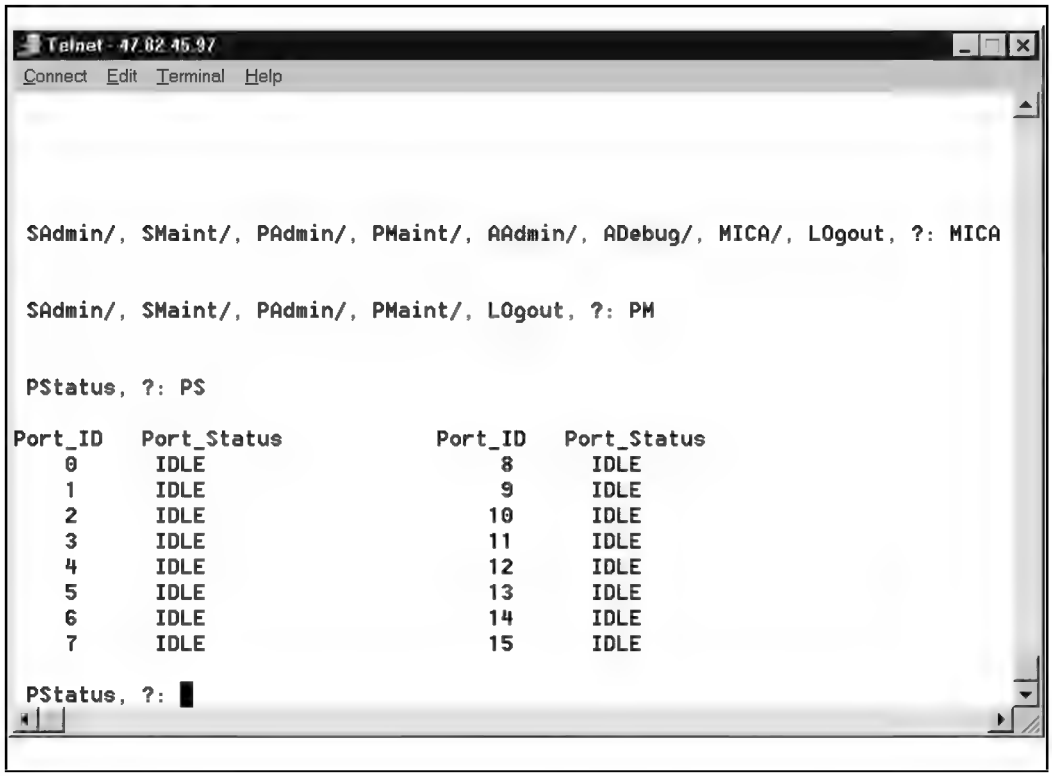
Fault isolation and card replacement

This section explains how to diagnose some MICA faults and how to diagnose and replace a defective MICA card. Also included are troubleshooting suggestions on how to achieve successful MICA-to-modem communication.

Symptom: Calls ring but MICA does not answer or CLI output reads: "Failed to acquire"

1. Access the CLI.
2. At the main menu select MICA
3. At the next menu, select PM
4. At the next menu, select PS (see Figure 56)
5. Check that the number of idle/busy ports equals the number of idle/busy ports defined in the Meridian 1 for the MICA. Check that both equal the number of MICA ports purchased.

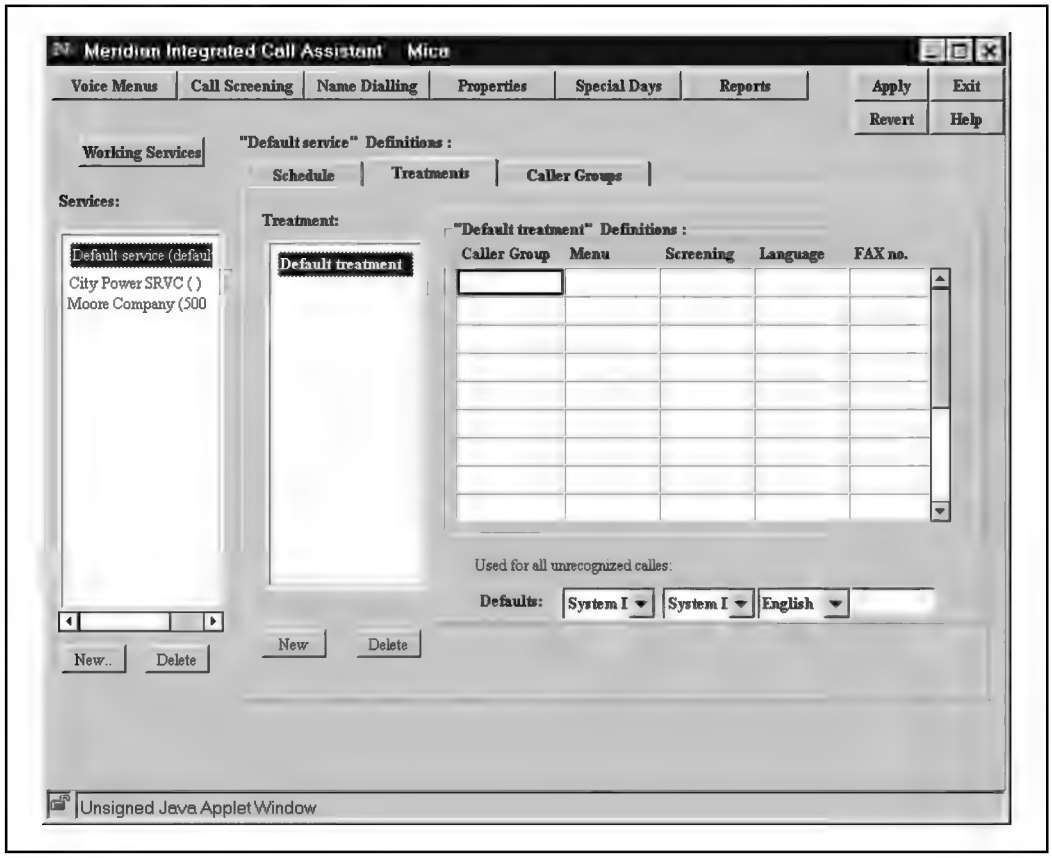
Figure 56
PStatus screen


Telnet - 47.82.45.97
Connect Edit Terminal Help
SAdmin/, SMaint/, PAdmin/, PMaint/, AAdmin/, ADebug/, MICA/, LOgout, ?: MICA
SAdmin/, SMaint/, PAdmin/, PMaint/, LOgout, ?: PM
PStatus, ?: PS
Port_ID Port_Status Port_ID Port_Status
0 IDLE 8 IDLE
1 IDLE 9 IDLE
2 IDLE 10 IDLE
3 IDLE 11 IDLE
4 IDLE 12 IDLE
5 IDLE 13 IDLE
6 IDLE 14 IDLE
7 IDLE 15 IDLE
PStatus, ?:

Symptom: Calls answered, but there is no voice response

1. Login to the MICA BUI.
2. Click on **Treatments** window.
3. Verify that a language is defined in the appropriate service.

Figure 57
Treatments window



Symptom: Callers hear "System unavailable"

1 Login to Telephone User Interface.

2 Verify recording of voice files defined in BUI "Voice Menus".

Symptom: Disabled peripheral equipment card

One IPE card is disabled, the red LED on a PE card is lit, or two or more units on a card are disabled. There is a system message indicating that the card or units on the card are disabled. Only one card on the shelf is affected. Look up all system messages and maintenance display codes in the *X11 System Messages Guide* (553-3001-411) and follow the instructions given. If the fault does not clear, use this procedure.

Manual continuity tests can be used to isolate IPE faults. See "LD45" in the *X11 Administration* (553-3001-311) for details on performing the tests.

> ***Note:*** Continually observe and look up system messages as you perform this procedure.

Replace equipment as described in *Hardware Replacement* (553-3001-520). You may need to replace one of the following:

— Controller card: NT8D01BC, NT8D01AC, NT8D01AD

— Dual loop peripheral buffer (DLB) card: QPC659 or NT5K10

— Superloop network card and network card: NT8D04, QPC414

— IPE card

— IPE card cage: NT8D37

Possible cause	Action
Defective PE card	Replace the affected card. Enable the card by entering: **LD 32** **ENLC l s c** "l s c" represents loop, shelf, and card numbers. Test the card by entering: **LD 30** **SHLF l s**
Defective controller card or DLB card	Replace the controller card or DLB card. Enable the card by entering: **LD 32** **ENLC l s c** Test the card by entering: **LD 30** **SHLF l s**
Defective network card	Replace the network card. Test the loop by entering: **LOOP loop** "loop" represents the loop number.
Defective backplane	Replace the card cage assembly in the module.

Symptom: Unable to establish modem communications with MICA

1. Make sure the MICA adapter is correctly installed.
2. Make sure null modems are installed where required.
3. Make sure MICA is plugged into the backplane.
4. Try to establish a Telnet session with the MICA card or connect to MICA directly through the adapter serial port.
5. Check the modem configuration. The settings below are only provided as an example and represent a US Robotics® 14.4 Sportster modem. Your settings may vary. Consult modem manufacturer's documentation.

   Set modem to auto answer:

   — ats0=1

   — at&wo to save settings

   Disable result codes

   — atq1

   — at&w0

6. Check local modem switch settings as described in the next section.

Local modem switch settings

1. Turn modem off.
2. Set dipswitches:
   a. 1 down — Modem ignores Data Terminal Ready DTR (Override).
   b. 2 up — Verbal Result codes.
   c. 3 down — Results Code Display enabled
   d. 4 up — Keyboard commands displayed
   e. 5 up — Modem answers on first ring, or higher if specified in NVRAM.
   f. 6 up — Modem sends Carrier Detected CD signal when it connects with another modem, drops CD on disconnect.

g 7 down — Load generic template from ROM.

h 8 down — AT Command Set Recognition enabled (Smart Mode).

3 Turn modem on.

4 Define the terminal parameters:

a 9600bps baud rate, 8-bit none, 1 stop bit:

5 Define modem parameters:

a Press AT&F0 — Load the generic template read only factory configuration)

b Press ATS0=1 — Set register 0 to 1 (number of rings is 1).

c Press AT&B1 — Fixed serial port rate.

d Press ATY0 — Hardware Flow Control template settings in NVRAM.

e Press ATQ1 — Quiet mode, no result codes.

f Press AT&W0 — Modifies the NVRAM 0 template (Y0)

g Press AT&W1 — Modifies the NVRAM 1 template (Y1).

6 Turn modem off.

7 Set dipswitches:

a 1 down

b 4 down — echo suppressed

c 8 down

d 2 up

e 3 up — Results Code Display suppressed

f 5 up

g 6 up

h 7 up - Load Y or Y1 configuration from user defined NVRAM

MICA hardware replacement procedures

The *X11 Administration* (553-3001-311) describes all maintenance commands. Use the *X11 System Messages Guide* (553-3001-411) to interpret system messages.

WARNING

Module covers are *not* hinged; do not let go of the cover. Lift the cover away from the module and set it out of your work area.

Backup the MICA database

When you backup the database, you login to the MICA CLI and select SMaint/ARchivdb. You back up only voice, data and report files, not application, firmware or BUI. If you use a backup disk that already contains a database, the backup process overwrites existing files with the same names on the target disk. The copied database includes the keycode of the original disk. If the copy is used on another card (for example, card B), a keycode inconsistency will be detected at reset. Entering the keycode belonging to card B is all that is necessary, provided that card B is a legitimate MICA card.

Do not use the BUI during the backup or restore process.

Note: Database backup can take approximately one hour.

CAUTION

You disable MICA to perform the database backup.

Note: You must disable MICA before you backup the database.

1 Software disable the MICA:

LD 32

DISC l s c "l s c" are loop, shelf, and card numbers

You will see "NPR011" on the system terminal when the card is disabled. Busy channels will not be disabled until the call is disconnected.

2 Insert a spare PCMCIA disk in MICA slot B.

3 Login to the MICA Command Line Interface.

4 From the main menu, select MICA/SMaint/ARchivdb

5 Follow prompts to backup the MICA database.

Note: MICA displays Acquire Failed" messages when you disable it in LD32. If you want to disable the "Acquire Failed" commands, select AA from the CLI Main Menu, then select MA and type in SH0. If you take this step, you need to restart the MICA after database upgrade is complete.

How to use the Restore command

1 Login to the MICA Command Line Interface.

2 From the main menu, select MICA/SMaint/REstordb

3 Follow prompts to perform the Restore process.

When you use the restore command, you copy ALL files from a PCMCIA hard disk or Flash device in Slot A to the device in Slot B. While the backup command copies ONLY the database from the device in Slot B to the device in Slot A. When you use the Restore command, make sure you use a PCMCIA device that was previously only used as a target disk for a backup.

Backup and restore Flash devices to Flash devices only.

Back and restore hard disks to hard disks only.

Remove MICA

1. Eject PCMCIA disk from slot A.
2. Unhook locking devices and slide MICA out of card cage.
3. Remove and retain the MICA security device. The device is a round disk and resembles a watch battery. It clips onto the card.

Replace MICA

1. Remove replacement MICA from shipping box.
2. Install the original PCMCIA disk into Slot A of the replacement MICA.
3. Install the original security device on the new MICA.
4. Insert the replacement MICA into the vacated slot and hook the locking devices.

   Note: When IPE cards are installed, the red LED on the faceplate remains lit for 2 to 5 seconds as a self-test runs. If the self-test completes successfully, the LED flashes three times and remains lit until the card is configured and enabled in software, then the LED goes out. If the LED does not follow the pattern described or operates in any other manner (such as continually flashing or remaining weakly lit), replace the card.

5. Software enable the MICA:

   LD 32

   ELNC l s c "l s c" are loop, shelf, and card numbers

   When the process is complete, you will receive a system response.

   To Exit LD 32:

   ****

6 Test the MICA:

LD 30

SHLF l s "l s" are loop and shelf numbers

Note: This command tests every card on the designated shelf.

If there is a problem, an NPR system message is generated and the red LED(s) on the faceplate of the card will remain lit.

If there is no problem, exit LD 30:

****

7 Tag defective equipment with a description of the problem and package it for return to a repair center.

How to upgrade the MICA firmware

These procedures explain how to upgrade the MICA firmware.

1 Login to the Command Line Interface to disable MICA call-handling functionality. Functionality returns after you reset MICA after the upgrade.

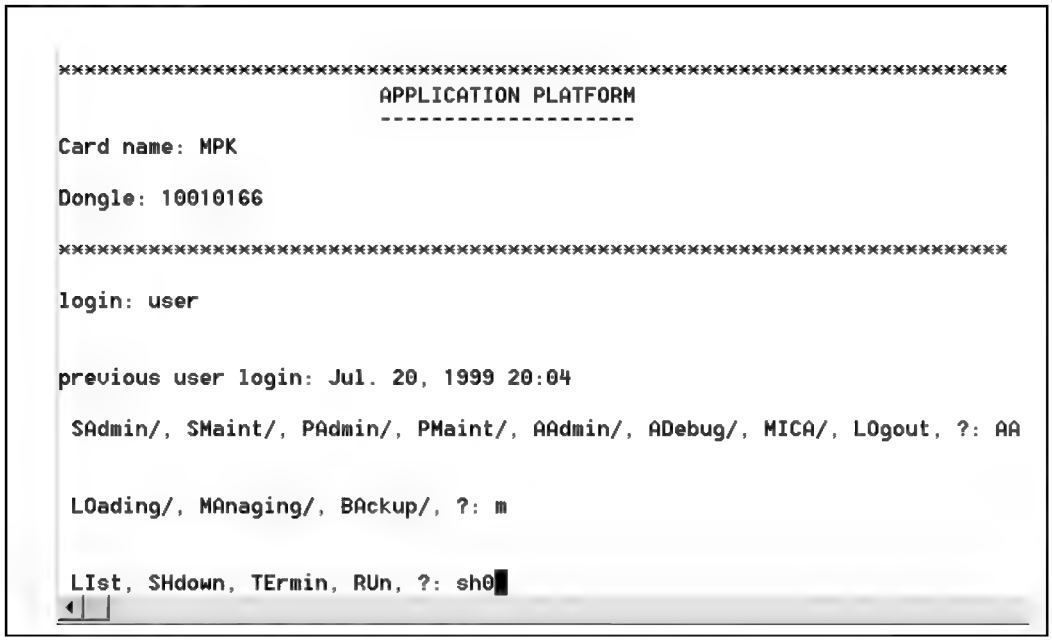
2 At the CLI Main Menu prompts - SAdmin/, SMaint/, PAdmin/, AAdmin/ , ADebut/, MICA/, LOgout, ?: enter AA (see Figure 58).

3 At the next menu - LOading/, MAnaging/, BAckup/, ?: enter m

4 At the next menu - LIst, SHdow, TErmin, RUn, ?: enter sh 0

5 Press /, to return to the CLI Main Menu.

Figure 58
AAdmin menu


APPLICATION PLATFORM
Card name: MPK
Dongle: 10010166
login: user
previous user login: Jul. 20, 1999 20:04
SAdmin/, SMaint/, PAdmin/, PMaint/, AAdmin/, ADebug/, MICA/, LOgout, ?: AA
LOading/, MAnaging/, BAckup/, ?: m
LIst, SHdown, TErmin, RUn, ?: sh0

6 Open Overlay 32 and software-enable the MICA card:

LD 32	to load the program
REQ	NEW CHG PRT
ENLC	l s c - l=loop, s=shelf, c=card
****	to exit the program

7 Log out of the BUI and do not use the BUI until you complete the upgrade.

8 Place the new firmware disk in slot B.

9 At the CLI Main Menu prompts - SAdmin/, SMaint/, PAdmin/, AAdmin/ , ADebug/, MICA/, LOgout, ?: enter MICA.

10 At the next menu - SAdmin/, SMaint/, PAdmin/, PMaint/, LOgout, ?: enter PA

11 At the next menu - PSweditor, FUpgrade, SWupgrade, ABreset, SCReen, ?: press SW

12 MICA displays the current software release, for example:

Software release: 01, Issue 03

13 At the prompt: Modify, Save, Cancel: **M**

14 Modify s/w? (Yes, (No)) **Y**

15 Modify, Save, Cancel: **S**

16 MICA displays "UPGRADE process is in progress."

17 MICA is disabled for several minutes. When the upgrade is complete, MICA prompts:

new s/w will be used following AP restart

Restart AP ? (Yes, (No)) **Y**

18 MICA restarts the card.

19 Re-enable the MICA using Overlay 32.

Appendix A: I/O panel slot charts

Cables are designated by the letter of the I/O panel cutout (A, B, C, and so on) where the 50-pin cable connector is attached. Each cable has three 20-pin connectors (16 positions are used), designated 1, 2, and 3, that attach to the backplane. Using the designations described, the backplane ends of the first cable are referred to as A-1, A-2, and A-3.

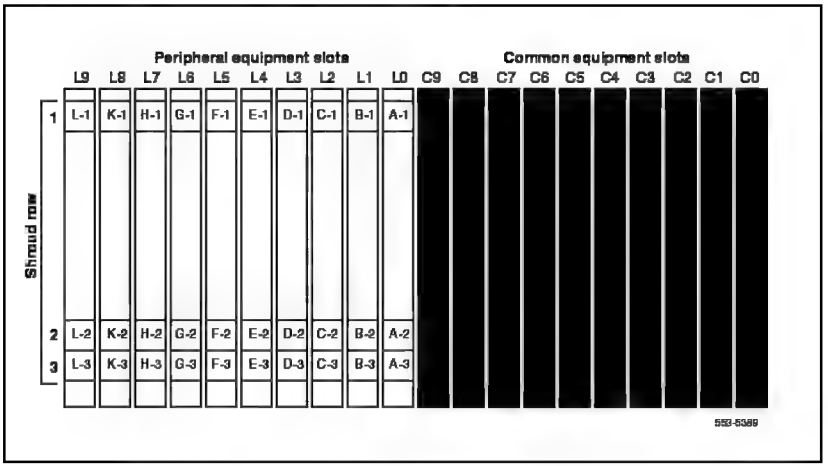
The locations of the cable connectors on the backplane are designated by the slot number (L0 through L9 for NT8D11, L0 through L15 for NT8D37) and the shroud row (1, 2, and 3). Using these designations, the slot positions in the first slot are referred to as L0-1, L0-2, and L0-3.

In NT8D11BC and NT8D11EC (and later vintage) CE/PE Modules, all 10 IPE card slots support 24-pair cable connections. Table 21 shows the cable connections from the backplane to the inside of the I/O panel. Figure 59 shows the designations (such as A-1) for the backplane end of the cables, and the backplane slot designations (such as L0) for the cable connections.

Table 21
NT8D11 cable connections

Backplane slots–shroud rows	I/O panel/cable designation
L0–1,2,3	A
L1–1,2,3	B
L2–1,2,3	C
L3–1,2,3	D
L4–1,2,3	E
L5–1,2,3	F
L6–1,2,3	G
L7–1,2,3	H
L8–1,2,3	K
L9–1,2,3	L

Figure 59
NT8D11 backplane cable designations

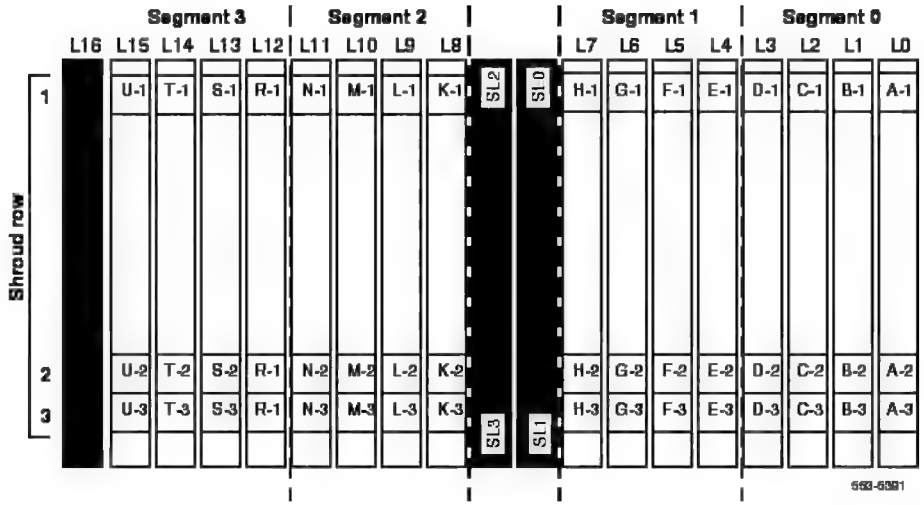

Peripheral equipment slots
Common equipment slots
L9 L8 L7 L6 L5 L4 L3 L2 L1 L0 C9 C8 C7 C6 C5 C4 C3 C2 C1 C0
Shroud row
1 L-1 K-1 H-1 G-1 F-1 E-1 D-1 C-1 B-1 A-1
2 L-2 K-2 H-2 G-2 F-2 E-2 D-2 C-2 B-2 A-2
3 L-3 K-3 H-3 G-3 F-3 E-3 D-3 C-3 B-3 A-3
553-5389

In NT8D37BA and NT8D37EC (and later vintage) IPE Modules, all 16 IPE card slots support 24-pair cable connections. Table 22 shows the cable connections from the backplane to the inside of the I/O panel. Figure 60 shows the designations for the backplane end of the cables, the backplane slot designations for the cable connections, and the associated network segments for the backplane slots.

Table 22
NT8D37 cable connections

Backplane slots–shroud rows	I/O panel/cable designation
L0–1, 2, 3	A
L1–1, 2, 3	B
L2–1, 2, 3	C
L3–1, 2, 3	D
L4–1, 2, 3	E
L5–1, 2, 3	F
L6–1, 2, 3	G
L7–1, 2, 3	H
L8–1, 2, 3	K
L9–1, 2, 3	L
L10–1, 2, 3	M
L11–1, 2, 3	N
L12–1, 2, 3	R
L13–1, 2, 3	S
L14–1, 2, 3	T
L15–1, 2, 3	U

Figure 60
NT8D37 backplane cable designations


Segment 3
Segment 2
Segment 1
Segment 0
L16 L15 L14 L13 L12 L11 L10 L9 L8 L7 L6 L5 L4 L3 L2 L1 L0
Shroud row
1
2
3
U-1 T-1 S-1 R-1 N-1 M-1 L-1 K-1
U-2 T-2 S-2 R-1 N-2 M-2 L-2 K-2
U-3 T-3 S-3 R-1 N-3 M-3 L-3 K-3
SL2
SL0
SL3
SL1
H-1 G-1 F-1 E-1 D-1 C-1 B-1 A-1
H-2 G-2 F-2 E-2 D-2 C-2 B-2 A-2
H-3 G-3 F-3 E-3 D-3 C-3 B-3 A-3
553-5391

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Meridian 1

Meridian Integrated Call Assistant (MICA)

Engineering, installation, administration, and maintenance

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